SOUTHERN RHODESIA.

REPORT

ON

The Public Health

For the Year 1929.

Presented to the Legislative Assembly,

1930.

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PART I.

CHAPTER I.—ADMINISTRATION.

With the exception of an epidemic of smallpox towards the end of the year, affecting certain of the native districts in the north of the Colony, no other event occurred during the year under review which adversely affected the health of any section of the people; the mortality and sickness rates from the more common causes of sickness and invalidism having remained more or less constant.

The extension of medical facilities to natives remote from doctors and hospitals has continued to receive the attention of the Government, and here considerable progress has been made, more especially in the organised search for and treatment of venereal diseases and yaws; helminthiasis amongst indigenous and alien natives in employment being also the subject of special investigations.

Missionary societies took increased advantage of the grants-in-aid offered by the Government for medical mission work amongst the indigenous natives, and at missionary conferences this subject aroused keener interest and more discussion than has been given to it formerly, the general opinion, as expressed by the resolutions, being that the assistance accorded by the Government for this side of mission work was much appreciated.

There has been a much-needed increase in the number of maternity beds set aside in one or two centres, and there is now adequate provision for this in rural and urban areas, so far as it applies to Europeans. Maternity and Child Welfare Associations are steadily extending their scope of operations with increased results, though there is still much spade work to be done, especially amongst the coloured races and indigenous natives living in and around the towns, villages and mining camps.

The health of the school child calls for and has received increased attention, this Colony being well in the front rank in the provision it makes for the inspection and treatment of school children of European parentage, and it will not be long before machinery will be available for an extension of similar facilities to the coloured and Asiatic schools.

Considerable changes have been effected in the personnel of the School Inspector's staff, there being now two Medical Inspectors of Schools instead of one as formerly, the second being a lady doctor, whose duties lie chiefly with the school girls and infant schools, but who is also employed in

lecturing and assisting in the organisation of Child Welfare Centres and Ante-Natal Clinics. It was also found necessary to appoint a second Schools Dental Surgeon, and it is now anticipated that the teeth of all school entrants will be examined every year and that all children who are attending a Government school and who are eligible for treatment by the Schools Dental Surgeons will have the opportunity of having their teeth examined and, where necessary, treated at least every second year during his or her scholastic life.

Particular attention is directed to the report of the Senior Medical Inspector of Schools, which is printed in Part II. of this report; this is of special interest and reveals the rising importance of this branch of the public health of the Colony.

Hospital construction has proceeded according to programme; in Bulawayo and Salisbury the Government hospitals are now well equipped and up-to-date, while in the smaller towns the old pioneer hospitals are gradually being replaced by buildings of modern construction more in accord with present-day requirements. As all general hospitals in the Colony are built and maintained by the Government and are unassisted financially by either local authority or by voluntary subscription, this entails that the rate of construction must depend on the buoyancy of the Colony's revenue rather than the needs of the people most concerned, a position which, as has been pointed out on more than one occasion, has many obvious drawbacks.

Municipalities and other local authorities are slowly but increasingly accepting the position that the responsibility for the care of the health of the people in the areas under their control must more and more devolve on them, and proportionately less on the central Government, a position which has not been accepted without a struggle, but gradually the wider view is coming to prevail, and will undoubtedly spread. This change of view is evidenced by the clearer realisation which is taken by local authorities of the responsibilities which fall upon them for the control of infectious and contagious diseases, the establishment of anti-venereal clinics and more liberal municipal grants to Child Welfare Societies, Maternity Hostels and District Nurses.

It is somewhat hard to realise that this little Colony is still in the making, and that the customs of the pioneer days are still strongly in evidence, and that the birth and development of a civic spirit must be a gradual and in many cases a difficult process, often preceded by bitter struggles before the sense of the people prevails.

The arrangement with the London School of Hygiene and Tropical Medicine, whereby, in consideration of an annual grant-in-aid from this Government, the School agrees to send out one or more Research Fellows to carry out investigations in Southern Rhodesia of local diseases demanding special attention, continues, and has been re-affirmed for another period of five years. Dr. Ross, the Research Fellow from the School, who was engaged for four years in the study of the aetiology and bio-chemistry of blackwater fever, and Mr. Leeson, who has assisted him by the preparation of an anopheles survey of those parts of the Colony where blackwater fever prevails, both completed their investigations in Southern Rhodesia during the year, and have now returned to England. The former has been allowed six months for the preparation of his report on the results of his work in the Colony, which report it is expected will be issued shortly.

By mutual arrangement between this Government and the Director of the School, the next Research Fellow to be sent out will be a Helmintholo-gist, who will devote at least a year to the study of intestinal and other parasites of man, a subject of extreme economic importance to this country.

It has finally been agreed to establish a Clinical Public Health Laboratory at Bulawayo, which will be financed in part by the Government, in part by the Town Council of Bulawayo and in part by the Rhodesia Railways, and it is hoped that this laboratory will be ready early in 1930.

The Medical, Dental and Pharmacy Act became law in 1927, but the Southern Rhodesia Medical Council, which then came into being, did not really commence to function till September, 1928. Only one meeting of the General Council was held during this year, but the Executive met monthly for the transaction of business, much of its time being devoted to the preparation of the rules and regulations under the Act. It is unfortunate that delays, for the most part of an unavoidable character, were experienced in preparing and bringing before the Government the draft rules and regulations prescribing fees and procedure to be adopted in the registration of doctors, dentists, chemists and nurses, midwives and masseurs. These, however, have at last been completed and are now before the Government, and it is expected will receive Ministerial sanction and come into operation at any early date.

I regret to have to report the tragic death of Dr. Grantley Barratt, the Government Medical Officer, Sinoia, who expired in March as the result of an accidental gun-shot wound. He was a sound and efficient medical officer, and his loss is greatly deplored.

While this report was in course of preparation the sudden death occurred of Major Francis Heygate Ellis, M.C., the Senior Government Medical Officer at Bulawayo. Dr. Ellis had 25 years' service as a medical officer with this Government, and was one of the most honoured and respected members of the staff of the Public Health Department. His death is a loss not only to this Department and to his friends, but also to the people of the Colony, amongst whom he was most deservedly popular.

Financial.—The following figures show the expenditure under the Public Health and Hospital Votes under the respective headings for the year 1929, as compared with 1928, 1927, 1926 and 1925.

PUBLIC HEALTH (EXPENDITURE).

	1929	1928	1927	1926	1925
	£	£	£	£	£
Staff salaries	30,304	29,736	28,314	27,304	24,972
Travelling expenses, Medical Director and staff, Government Medical Officers, Bacteriologist, Compound Inspectors, and rail and port charges	6,988	7,832	6,329	5,453	4,100
Treatment, maintenance and transport of lunaties, lepers and sick paupers, repression of infectious and contagious diseases, upkeep of lazarettos, purchase of quinine and vaccine lymph, grants and subsidies ...	15,653	19,003	13,194	10,335	8,533
Public Health Laboratory and other Charges.					
Expenditure	1,539	1,238	2,257	1,568	594
Totals	54,484	57,809	50,094	44,660	38,199

PUBLIC HEALTH (REVENUE).

	1929	1928	1927	1926	1925
	£	£	£	£	£
Bacteriological fees	504	619	572	392	139
Sale of quinine	1,716	1,827	2,245	2,281	2,331
Fees from native clinics	23	...	...	...	...
School dental fees	135	...	...	...	...
Totals	2,378	2,446	2,817	2,673	2,470

HOSPITALS AND ASYLUMS (EXPENDITURE).

	1929	1928	1927	1926	1925
	£	£	£	£	£
Salaries	30,665	29,350	25,198	23,890	21,533
Travelling expenses on appointment, duty or leave, rail and port charges... ...	1,791	2,217	1,389	1,645	1,255
Drugs, disinfectants and surgical appliances	10,813	10,402	7,362	6,792	7,005
Fuel, light and water	6,834	5,539	4,869	4,480	3,971
Furniture, equipment, repairs and clothing	6,904	7,795	9,396	6,975	4,325
Grants: recreation	90	—	—	—	—
Grants-in-aid to hostels, hospitals and district nursing	4,435	5,017	2,269	1,992	2,959
Laundry	1,757	1,842	2,214	1,558	1,446
Miscellaneous	1,215	1,093	656	868	473
Provisions and medical comforts (including "produce, etc.")	24,722	23,186	21,260	7,754	6,596
Produce, etc.	†	†	†	11,446	11,181
Rail and port charges on hospital equipment	286	153	—	—	—
Sanitary fees, etc.	567	622	608	566	508
Totals	‡90,079	87,216	75,221	67,966	61,252

† Now included under "Provisions and medical comforts."

‡ Not including the sum of £1,541 spent on general hospital stocks imported from London.

HOSPITALS AND ASYLUMS (REVENUE).

	1929	1928	1927	1926	1925
	£	£	£	£	£
Fees collected from paying patients ...	31,944	30,478	27,166	25,847	21,251

Expenditure on Government hospitals, including Ingutsheni Mental Hospital, during 1929 amounted to £90,079 gross, as compared with £87,216 during the previous year.

The revenue collected amounted to £31,944, as against £30,478 in 1928.

The gross earnings from paying patients amounted to £40,695, as compared with £40,452 for the previous year, an increase of £243, while the total number of patients maintained was 12,853, as compared with 12,053 in 1928, an increase of 800.

Reports on the hospitals are given in Chapter V., and returns showing the number of beds, daily average of patients treated, and the expenditure and revenue for each hospital, will be found in Part III. of this report.

CHAPTER II.—WORK OF THE DEPARTMENT.

Public Health Laboratory.—The departure of the Research Scholar and the Research Entomologist in the middle of the year brought to an end the investigations in Southern Rhodesia which have been carried on by the London School of Hygiene and Tropical Medicine in the country for the last five years. The routine work of the laboratory was continued as before, with some diminution in the amount of work undertaken, owing to the absence on leave of the Director for five months.

The report of the Director, which is printed in Part II. of this report, sets out in detail the work of the laboratory for the year under review and the results attained, again demonstrating a year of steady progress, a progress which has been continuous since it came into being. It is probable, however, that the establishment of another laboratory at Bulawayo may, at first, re-act on the Clinical Laboratory at Salisbury.

The appointment of a Government Analyst has been more than justified, and the investigations undertaken in this laboratory are increasing both in number and importance.

Medical Inspection of Schools.—The medical inspection of school children is extending rapidly, and more and more care is being directed to the health of the school child. It is a popular supposition that the medical inspection of schools covers only the medical examination of the children at periodic intervals, and the furnishing of reports to the Government on their state of health. In actual fact the duties of the Medical Inspectors are infinitely more comprehensive, for in addition to any mere medical examination of the children, they include such subjects as the state of school buildings, ventilation of class-rooms and dormitories, sanitary conveniences, ablutionary facilities, diet, dress, physical training, and in fact everything which pertains to the life of the school child, all of which aims at achieving an improvement in the schools themselves, and healthier conditions for the scholars.

Separate investigations were made, and reports rendered on mentally defective children, defective vision, diet in school boarding houses, and physical training in Government schools, all of which subjects are receiving the careful consideration of the Government.

A full detail of the schools' work for the year will be found in the report of the Medical Inspector of Schools, which is printed in Part II. of this report.

Inspection of Mine Compounds and Native Labour employed on Mines and other Works.—The two Inspectors of Compounds, who are Native Department officials of sufficient seniority and experience, and who are seconded to the Public Health Department for a period of two years, travelled in the course of their duties on an average 3,500 miles by road monthly, and 560 miles by rail each alternate month.

Their duties embrace the application of the health and sanitary sections of the Mines and Works Regulations, and the administration of the Native Labour Regulations in so far as these concerned the labourers in their inspectorates.

There were three prosecutions during the year for non-payment of wages, and seven other cases of the same nature were satisfactorily arranged without invoking legal aid; in spite of these the Inspectors report fewer complaints with regard to working conditions generally.

The feeding and housing of native miners, and their sanitary conditions, were reported upon as satisfactory, whilst several of the larger mines are undertaking extensive schemes for new and permanent compounds, with large vegetable gardens attached. Three new native mine hospitals have been erected on mines during the year.

Southern Rhodesia Nursing Service.—The activities of the Nursing Service continue to extend, and the Service as a whole is now attracting considerable attention in England and in the Union of South Africa, applications from a large number of well qualified nurses having been received from outside our borders. Altogether 106 applications from qualified nurses were received, from which 44 appointments were made.

Probationer nurses are selected as far as possible from daughters or dependants of settlers in the Colony, and 140 applications for vacancies in the Service were received, from which 42 appointments were made. Sixty-seven of the applicants were non-resident in Southern Rhodesia.

Thirty-four members of the qualified staff left the Service, including the Assistant Matron, Salisbury, and one matron from an outside station. Twelve nurses left on account of approaching marriage and twenty for other reasons. Eleven qualified nurses were promoted to the rank of sister, two sisters to matron, and one sister was promoted to the rank of assistant matron. Forty-three of the probationers left the Service, 15 on completion of their training, 8 for health reasons, and 20 for other reasons.

Our probationers still enter for the South African Medical Council examinations, but it is anticipated that an Examining Board for qualified nurses will be set up in Southern Rhodesia at an early date.

The results of the examinations during 1929 were as follows:—

12 entered for the final examination, of which 12 passed (3 with honours).

21 entered for the preliminary anatomy and physiology examination, of which 16 passed (1 with honours) and 5 failed.

Habit-forming Drugs Legislation.—Under the Southern Rhodesia Opium and Habit-forming Drugs Regulations Proclamation of 1923 and Government Notice No. 410 of July, 1929, the following drugs were declared to come within the meaning of the Act:—

"Dilaudide, benzoyl morphine, the morphine esters, and the methyl and benzoyl derivatives of ecgonine."

Import Certificates.—Sixty-one import certificates were issued, two of which were subsequently cancelled.

The total quantities of habit-forming drugs covered by these certificates as compared with last year are stated below, and as in 1928 the greater portion of the anhydrous morphine was imported in tincture of opium. With the exception of cocaine and heroin, these figures show there is no increase in the importation of habit-forming drugs.

	1928.	1929.	
Anhydrous morphine	71.36	71.41	ounces.
Medicinal opium	42.8	42.57	ounces.
Diacetylmorphine (heroin)	3.96	5.23	ounces.
Cocaine	20.5	29.35	ounces.
Cannabis indica extract	—	6	ounces.
Codeine phosphate	—	3.3	ounces.
Hemp seed	—	2	cwt.
Extract of opium	208 grains	nil.	

Export Certificates.—Eight export certificates were issued (and one cancelled) for the following drugs:—

	1928.	1929.	
Anhydrous morphine	105.7	53.4	grains.
Diacetylmorphine (heroin)	83.3	54	grains.
Cocaine	232.25	91.6	grains.
Opium	—	2	ounces.

Permits, issued by the Veterinary Department under the provisions of Government Notice No. 368 of June, 1924, numbered 19, representing 180½ ounces of tincture of opium and 10 c.c. of 2 per cent. soluble cocaine hydrochloride.

Medical Council.—It is with deep regret that I have to record the death of Dr. N. S. MacNaughtan, M.B., Ch.B., 1906, M.D. 1911, Univ. Glasgow, a medical member of the Executive Committee.

During 1929 the admissions to practise were as follows:—

Medical Practitioners.—Dr. C. Berman, M.B., Ch.B., 1928; Dr. H. Duff, M.B., Ch.B., New Zealand, 1917; Dr. F. Sandler, Univ. Padua, Italy; Dr. R. Manning, M.R.C.S., Eng., 1927, L.R.C.P., Lond.; Dr. J. Wakeford, M.B., B.S., 1927; Dr. G. F. Eagle, M.B., Capetown, 1925; Dr. B. Moiser, M.B., London, 1904, D.P.H., R.C.P.S., Eng., 1911.

Dentists.—F. G. Reid, L.D.S., Edin., 1923; A. Silva Jones, L.D.S., R.C.S.; J. Paterson, L.D.S., R.F.P.S.

Chemists and Druggists.—L. N. Cunningham, M.P.S.; A. A. T. Favard, M.P.S.; E. M. Favard, M.P.S.; D. J. Mullen, Natal Pharmacy Board; E. S. Morison, Phar. Society, G.B.; E. G. Smith, Transvaal Pharmacy Board; W. F. Wynne, P.N.C., M.P.S.

The registers of the Medical Council of Southern Rhodesia show the following numbers as registered at 31st December, 1929:—

Medical practitioners	114
Dental surgeons	25
Chemists and druggists	54

Public Health Legislation.—The only new legislation bearing on public health was the publication of regulations framed under section 14 of the Public Health Act of 1924, dealing with the transfer of milk in public thoroughfares.

CHAPTER III.—VITAL STATISTICS, 1929.

Population.—The mean population—European, Asiatic and coloured—as at the 30th June, 1929, is estimated by the Government Statistician as follows:—

	Persons.
European	46,344
Asiatic	1,592
Coloured	2,310
Total	50,246

The estimate indicates an increase in the European population since the publication of the last annual report of 1,838 and includes additions in respect of (a) *natural increase* (*i.e.*, excess of births over deaths) amounting to 624; and (b) *net immigration* amounting to 1,214.

European Births.—European living births during the year numbered 1,093 (533 males and 560 females), as compared with 1,104 (563 males and 541 females) in 1928. Of the 1,093 births registered, 20 (8 males and 12 females) were illegitimate. Still births recorded (not included in either births or deaths) numbered 31. Plural births numbered 12.

The crude birth rate in 1929 per 1,000 of the estimated mean population was 23.6, compared with 24.8* in 1928. Omitting illegitimate births, it is estimated that the legitimate birth rate per 1,000 married women between 15 and 45 years of age was 174.7 in 1929, as against 182.7* in 1928.

The following International comparison may be of interest:—

CRUDE BIRTH RATES—INTERNATIONAL COMPARISON.

Country.	Year.	Crude birth rate.	Country.	Year.	Crude birth rate.
Roumania	1927	34.4	United States ... (Registration Area)	1927	20.6
Poland	1927	31.6	New Zealand ...	1927	20.3
Lithuania	1927	29.1	Irish Free State ...	1927	20.3
Spain	1927	28.5	Scotland	1927	19.8
Italy	1927	26.9	Denmark	1927	19.6
Union of South Africa †...	1927	26 0	Belgium	1927	18.4
Hungary	1927	25.2	Germany	1927	18.4
Southern Rhodesia † ...	1928	24.6	France	1927	18.2
Netherlands	1927	23.1	Norway	1927	17.8
Finland	1927	21.9	Switzerland ...	1927	17.4
Canada	1927	21.9	England and Wales ...	1927	16.7
Australia	1927	21.7	Sweden	1927	16.1
Northern Ireland ...	1927	21.3			

* Revised figure.

† European population only.

Asiatic and Coloured Births.—In addition to the foregoing, the following non-European births were recorded during the year:—

	Males.	Females.	Total.
Indian	40	38	78
Chinese	1	2	3
Coloured	32	20	52
British West Indian ...	—	1	1
Total	73	61	134

Of these, three coloured and two Indian were plural births, and 13 were illegitimate.

European Deaths.—The deaths among Europeans registered during the year numbered 469 (300 males and 169 females), as compared with 477 in 1928.

Crude European Death Rate.—Calculated on the estimated mean population in 1929, the European crude death rate was 10.1 per 1,000 of the total population. The corresponding rate in 1928 was 10.7.* The number of deaths of male Europeans was 300 in 1929, as compared with 316 in the previous year, a decrease of 16 deaths. Deaths of female Europeans numbered 169 and were 8 more than in 1928. It must not be overlooked that the rate of mortality varies greatly with age and sex, those for males being generally higher than for females, while for both sexes the rates are high at very young and very old ages, and low at intermediate ages. As the crude death rate conceals this variation among the various age-groups, the following table of specific death rates has been prepared to illustrate such variations.

SPECIFIC DEATH RATES PER 1,000 AT EACH AGE PERIOD, 1929.

Males and females separately.

Age period	1928			1929		
	Males	Females	Persons	Males	Females	Persons
Under 1 year	90.72	75.67	83.07	87.04	59.94	72.78
1-4 years	8.16	7.62	7.90	9.52	9.76	9.63
5-14 ,, ...	2.73	2.24	2.49	3.28	3.10	3.19
15-24 ,, ...	6.23	2.29	4.51	5.77	1.10	3.73
25-34 ,, ...	4.95	5.64	5.26	6.89	4.56	5.83
35-44 ,, ...	10.41	4.53	7.75	6.16	5.90	6.04
45-54 ,, ...	19.15	9.09	15.35	13.10	12.40	12.83
55-64 ,, ...	22.55	17.95	20.96	23.16	17.24	21.12
65-74 ,, ...	62.50	51.36	58.43	60.00	40.70	52.97
75 years and over ...	76.39	70.00	73.77	87.25	115.38	98.81
All ages ...	12.67	8.23	10.72	11.55	8.30	10.12

Infantile mortality is dealt with in a later paragraph.

At ages above that of infants the table indicates for both sexes an *increased* rate of mortality in 1929 for age-groups 1-4 years, 5-14 years and 75 years and over, and a *reduced* rate for age-group 15-24 years.

At other ages the rates for males in age-groups 35-44 years and 45-54 years and for females in age-groups 25-34 years and 55-64 years all show improvement in 1929, compared with 1928.

With the exception of age-groups 1-4 years and 75 years and over, the rates for females are more favourable than those for males.

* Revised figure.

Infantile Mortality.—The number of deaths of infants under one year of age registered during the past year was 73, or 7 less than in the previous year. The infantile death rate per 1,000 living births was 67 in 1929, compared with 72 in 1928. The chief causes of death among infants in 1929 were malaria, 9; whooping cough, 5; diarrhœa and enteritis, 12; congenital debility, icterus and sclerema, 13; and premature birth, injury at birth, 13. As is the experience elsewhere, the major portion of the deaths of infants under one year occurred in the first three months after birth.

INFANTILE MORTALITY, 1924-28 AND 1929.

Age at death.	Number of deaths.				Mortality per 1,000 living births.			
	Average 1924-8		Year 1929		Average 1924-8		Year 1929	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 week	12	7	11	9	23.1	16.2	20.7	16.1
1-3 weeks	5	4	3	5	9.1	8.7	5.6	8.9
Total under 4 weeks ...	17	11	14	14	32.2	24.9	26.3	25.0
4 weeks and under 3 months ...	6	4	8	4	11.9	8.7	15.0	7.2
3-5 months	6	5	11	5	12.7	10.9	20.6	8.9
6-8 months	3	4	4	5	6.8	9.2	7.5	8.9
9-11 months	3	2	6	2	6.0	3.9	11.3	3.6
Total under 1 year ...	35	26	43	30	69.6	57.6	80.7	53.6

It will be noted that the number of deaths during 1929 among male infants aged four weeks and over was above the average of the five previous years.

Details of the causes of death among children under one year of age for each of the last six years are given in the next table.

Maternal Mortality.—A subject of cognate interest to that of infantile mortality is the maternal mortality arising out of child-birth. Five cases of this kind were registered during 1929, and the death rate from these causes per 1,000 living births was 4.6.

CAUSES OF DEATH IN CHILDREN UNDER ONE YEAR OF AGE.

Causes of death.	1924.	1925.	1926.	1927.	1928.	1929.
	No.	No.	No.	No.	No.	No.
(5) Malaria	3	5	...	4	10	9
(7) Measles	...	1	...	...	1	1
(9) Whooping cough	5	1	2	...	2	5
(10) Diphtheria	...	1	1	...	...	...
(11) Influenza	2	4	...	1	2	2
(16) Dysentery	1	...	...	2	1	1
(21) Erysipelas	...	...	...	...	...	1
(31) Tuberculosis of the respiratory system	...	1	...	...	...	...
(37) Disseminated tuberculosis	...	...	...	...	...	1
(38) Syphilis	...	...	...	1	...	...
(41) Purulent infection, septicæmia	...	1	...	...	1	1
(56) Rickets	...	...	...	...	1	...
(69) Other general diseases	2	...	1	...	...	...
(71) Meningitis	3	...	1	1	3	2
(74) Cerebral hæmorrhage	...	...	...	1	...	...
(78) Epilepsy	...	...	...	...	...	1
(80) Convulsions of infants	1	6	2	3	2	1
(84) Other diseases of the nervous system	...	...	...	2	...	...
(86) Diseases of the ears	...	...	1	...	...	...
(88) Acute endocarditis	...	...	...	...	1	...
(90) Organic diseases of the heart	...	...	...	3	...	...
(92) Embolism and thrombosis	...	...	...	...	1	...
(98) Diseases of the larynx	...	...	1	...	...	...
(99) Acute bronchitis	3	3	...	1	1	2
(100) Broncho-pneumonia	2	3	1	7	1	3
(101) Pneumonia	7	6	4	...	8	2
(105) Asthma	...	...	...	1	...	...
(113 & 114) Diarrhœa and enteritis	7	5	6	2	11	12
(118) Hernias, intestinal obstructions	1	1	2	1	1	1
(119) Diseases of the intestines	...	1	1	...	...	...
(124) Other diseases of the liver	...	1	...	...	...	...
(126) Simple peritonitis	...	...	...	1	1	...
(151) Gangrene	1	...	...	...	...	...
(154) Other diseases of the skin and annexa	...	...	1	...	...	...
(159) Congenital malformations	1	1	1	2	10	1
(160) Congenital debility, icterus and sclerema	12	9	6	2	5	13
(161) Premature birth; injury at birth	14	12	12	9	16	13
(162) Other diseases peculiar to early infancy	...	2	...	2	1	...
(179) Burns, conflagration excepted	...	1	...	1	...	...
(181) Absorption of deleterious gases	...	1	...	...	...	...
(205) Cause of death not specified or ill-defined	...	2	3	1	...	1
Total	65	68	46	48	80	73

SUMMARY OF EUROPEAN VITAL STATISTICS, 1925 TO 1929.

(Note.—In some cases the figures for years prior to 1929 have been slightly revised.)

Item.	1925	1926	1927	1928	1929
	No.	No.	No.	No.	No.
Estimated European population (as at 30th June)	38,207	39,503	41,624	44,506	46,344
Births registered (not including still births)					
Male	443	560	504	563	533
Female	436	379	509	541	560
Total	879	939	1,013	1,104	1,093
	Per Mille.	Per Mille.	Per Mille.	Per Mille.	Per Mille.
Crude birth rate (per 1,000 of population)	23.0	23.8	24.3	24.8 †	23.6
	No.	No.	No.	No.	No.
Illegitimate births (included above)					
Male	11	11	13	9	8
Female	6	8	14	17	12
Total	17	19	27	26	20
Plural births (included above)	11	7	6	11	12
Still births (not included above)	26	25	26	29	31
	No.	No.	No.	No.	No.
Marriages	375	392	436	518	551
	Per Mille.	Per Mille.	Per Mille.	Per Mille.	Per Mille.
Marriage rate (persons married per 1,000 of population)	19.6	19.8	20.9	23.3	23.8
	No.	No.	No.	No.	No.
Deaths registered (not including still births)					
Male	239	228	258	316	300
Female	128	120	119	161	169
Total	367	348	377	477	469
	Per Mille.	Per Mille.	Per Mille.	Per Mille.	Per Mille.
Crude death rate (per 1,000 of population) ...	9.6	8.8	9.1	10.7 †	10.1
	No.	No.	No.	No.	No.
Deaths of infants under one year (included above) ...	68	46	48	80	73
	Per Mille.	Per Mille.	Per Mille.	Per Mille.	Per Mille.
Infantile death rate (per 1,000 living births) ...	77	49	47	72	67

† Revised figures.

CHAPTER IV.—PUBLIC HEALTH.

Infectious, Communicable and Preventable Diseases.

Notifiable Diseases.—Notification of cases of infectious diseases in urban areas shows improvement, but in rural districts, and especially amongst natives, the notification is still very imperfect and it cannot well be otherwise, as it is probable that quite a considerable number of cases are never seen by a medical practitioner.

The following summary of the bulletins of infectious diseases, which is issued weekly by the Public Health Department, is therefore only comparative, but shows an increase in the recorded cases of small-pox, whooping cough, enteric fever, diphtheria and cerebro-spinal meningitis:—

Disease.	1927. Number of cases.		1928. Number of cases.		1929. Number of cases.	
	European.	Native.	European.	Native.	European.	Native.
Chicken-pox ...	185	461	107	310	106	416
Small-pox ...	...	6	1	254	2	425
Scarlet fever ...	16	...	24	...	9	...
Measles	16	95	78	9	57	2
Whooping cough ...	8	3	41	4	129	56
Mumps	4	11	23	15	31	13
Influenza ...	48	189	20	159	3	97
Typhoid fever ...	35	15	33	19	61	16
Para-typhoid fever...	3	1	2	...	...	...
Diphtheria ...	7	1	11	1	26	2
Cerebro-spinal meningitis ...	3	18	9	29	7	52
Erysipelas ...	2	...	2	...	4	...
Ringworm ...	11	...	...	1	...	...
Scabies	..	1	...	1	...	...
Pyæmia	...	...	...	...	...	1
Puerperal septicæmia	...	...	...	...	1	...
German measles ...	...	...	...	...	6	1
Undulant fever ...	...	...	...	...	2	...
Trypanosomiasis ...	...	...	...	...	1	1
Totals ...	338	801	351	802	445	1,082

Small-pox.—For a number of years prior to 1928 this Colony was singularly free from small-pox, but in that year an extensive epidemic occurred in Northern Rhodesia, which, spreading along the railway line to Bulawayo, resulted in serious epidemics in the Bulawayo municipal area, the Bubi native district and elsewhere in the Colony.

In Southern Rhodesia itself these local epidemics were quickly suppressed, but unfortunately in the territories in the north the disease simmered on in a sporadic form for some time, and towards the middle of 1929 recurred as an epidemic, this time in North-Eastern Rhodesia and Nyasaland, and in that part of Portuguese East Africa along the Zambesi which lies to the south of these countries, and between North-Eastern Rhodesia and this Colony. The disease spread somewhat slowly along the native routes southwards, reaching the native districts of Mtoko and Mrewa eventually, and here the natives endeavoured to hide its presence till more than a couple of hundred cases had occurred. As soon as the extent of the outbreak was ascertained, isolation of the sick and contacts was effected with the assistance of cordons of special police, and this, together with the general vaccination of the native population in the affected areas and

in the neighbouring reserves, resulted in an early suppression of the epidemic, though limited outbreaks and sporadic cases continued to occur in other parts of the Colony for some time afterwards.

In 1929 there were altogether 428 cases of small-pox recorded as occurring amongst natives and three amongst Europeans.

Vaccination.—Vaccination of the unvaccinated native population and of alien natives coming into the Colony seeking work has been continued throughout the year, 104,205 vaccinations having been performed. European vaccinations are carried out systematically, and this section of the population is well protected, the conscientious objectors being, fortunately, in a very small minority.

The cost of calf lymph, which is purchased from the Union Government Vaccine Station at Rosebank, is an item of expenditure which is increasing annually, and the time has arrived when it has become advisable to consider the possibility of establishing a station in this Colony for the preparation of calf lymph, and this is now receiving the attention of the Government.

Diphtheria.—The incidence of diphtheria was more than doubled in 1929, there being 28 cases registered as against 12 in the previous year. One particularly severe outbreak occurred at the Daisyfield Orphanage at Somabula, the origin of which it was not possible to trace, but it was ascertained that the conditions under which the children were living were not altogether satisfactory from the point of view of health, and this has now received the attention of the District Medical Officer and the Medical Inspector of Schools.

There was an increase also in the number of cases reported from Salisbury and Bulawayo districts, and also from Shabani. Ten deaths from diphtheria were registered—5 Europeans and 5 native or coloured.

The rapid rise in the case incidence of this infectious disease is disquieting, and the detection of carriers and susceptibles of school age is a matter which calls for early attention.

Enteric Fever.—The case incidence of enteric or typhoid fever in the last two years has remained more or less constant, there being 78 cases recorded as against 72 in 1928. Of these 78 cases 57 were amongst Europeans and 21 amongst native and coloured, the deaths registered being 19, of which 13 were whites and 6 were natives. The mortality per case incidence was high, being over 21 per cent. of the cases occurring. There was a severe outbreak in the Gwelo-Selukwe district, 24 cases being reported from there. Every effort was made by the local authority and the district Government Medical Officer to locate the origin of the outbreak, but in this instance without success. Modified outbreaks were also reported from Gwanda, Shabani and Bulawayo.

The following table shows the number of cases admitted to general hospitals on account of this disease for the last six years:—

Year.	Cases.
1924	42
1925	24
1926	50
1927	45
1928	72
1929	78

Cerebro-spinal Meningitis.—Cases continue to be reported from time to time, the patients for the most part being natives. There was one notable exception, however, where four members out of six in one European family were infected and all four died, there being only two survivors. The carrier in this case was a native domestic servant who was traced and isolated. A number of cases occurred also on the Shabanie Asbestos Mine, all natives, the disease in this case being mild in type; there were 24 cases, with 5 deaths. The other cases reported were sporadic and scattered and their origin could not be traced.

Malaria.—The malaria met with is almost entirely of the aestivo-autumnal type, with a seasonal epidemicity, the density of the cases and the severity of the infection being in close relationship to the rainfall and in inverse ratio to the altitude.

The seasonal curve remains on the whole fairly constant, variations being determined largely by the climatic conditions prevailing in any particular year and its effect on the life of the anopheles mosquito, and there is a singular absence of those local epidemics which every now and then appear in the coastal parts of Natal and Zululand and parts of the Northern Transvaal.

The majority of the cases of malaria that occur are never seen by a doctor, and on this account alone it would be impossible to make it a notifiable disease, except in the case of limited populations in prescribed areas, and its variation in frequency and severity can only be determined by the admissions to general hospitals throughout the Colony; at the same time it must be understood that this can only relatively represent the incidence in the country as a whole.

The following table shows the admission rate to general hospitals per 1,000 of the population during the last seven years, with the deaths registered and the seasonal average rainfall for the same number of years:—

Year.	European admissions to hospitals.	European admission rate per 1,000 of the population.	Deaths registered.	Rainfall.	
				Season.	Average.
1923	953	26.32	49	1922/23	39.16
1924	413	11.11	13	1923/24	16.69
1925	765	19.68	21	1924/25	49.56
1926	614	15.67	14	1925/26	32.48
1927	545	13.09	15	1926/27	21.23
1928	726	16.15	10	1927/28	22.56
1929	668	14.42	15	1928/29	34.26

There was an increase in the admissions to the Salisbury, Victoria, Gwanda and Sinoia hospitals, and a decrease in Bulawayo, Umtali and Gatooma, with a total decrease of 58 European admissions and an increase of 69 native on the previous year.

The prevalence of malaria amongst the indigenous natives in reserves is unfortunately not known, nor can it be ascertained, and native admissions to general hospitals on account of malaria probably only apply to natives in employment.

The relative frequency with which malaria occurs amongst natives in employment can, however, to some degree be gauged from a study of the returns of the British South Africa Police for the last few years, and the following table shows the cases of malaria reported amongst the European and native troops respectively, with the percentage of cases in accordance with the strength of the corps in each particular year since 1924:—

BRITISH SOUTH AFRICA POLICE.

Malaria Fever Cases.

From 1st January, 1924, to 31st December, 1929.

Year.	European.			Native.		
	No. of cases.	Establishment.	Percentage of establishment.	No. of cases.	Establishment.	Percentage of establishment.
1924	139	487	28.542	239	849	28.151
1925	169	485	34.845	328	856	38.317
1926	99	481	20.582	261	866	30.138
1927	120	481	24.948	202	866	23.325
1928	137	517	26.499	161	944	17.055
1929	140	517	27.079	201	944	21.292

Average Number of Cases a Year.

European	134
Native	232

Average Percentage of Establishment.

European	27.0825
Native	26.3798

It will be seen that in the last six years approximately 30 per cent. of both European and native troops have suffered from malaria, but whilst the European troops are housed for the greater part in mosquito-proof barracks, have to carry a mosquito net on patrol and are required to take prophylactic doses of quinine when exposed to malarial infection, no such protection is exercised in the case of native troops, and it therefore may be assumed that the susceptibility to malaria in their case is very much less than it is in the case of white troops.

Though malaria has ceased to be a disease of extreme importance amongst urban populations in this Colony, and has shown no tendency to occur in epidemic waves as it has in certain towns in the Union, it is still the disease above all others which is of paramount importance to the rural population, and the cause of the greatest amount of sickness and economic loss, besides being a serious drawback to the beneficial settlement of a considerable portion of some of the most fertile parts of the country.

The older settlers, especially those of British origin or parentage, are by now thoroughly alive to the need for the adoption of protective measures against mosquito-borne diseases; it is unfortunate that the same cannot be said of a poorer type of white settler from the Union, who are woefully ignorant as a class and whose impoverished and unhygienic homes and general habits of life are a standing menace to themselves, their families and to those brought into contact with them, and must tend to the evolution of a more degenerate type of humanity, which may prove as great a problem in the future of this Colony as it is in the Union of South Africa to-day. Owing to poverty and lack of capital, these persons tend to drift to the more remote and often the more malarious parts of the Colony, and being markedly non-progressive, their presence in these districts not only re-acts adversely on the health of the Colony as a whole, but constitutes a bar to more beneficial occupation of the land by persons educationally and financially better equipped for the purpose.

It is interesting to note that so much has this attracted the attention of the authorities in the Union of South Africa, more especially in certain

parts of Natal and in the Northern Transvaal, that the Government there has been induced to set up an anti-malarial section of the Council of Public Health to deal especially with this problem, and it is even proposed to employ the services of a malarialogist of international experience to assist the Council and the Government in coping with the increasingly serious conditions which exist in the more highly malarious districts in the Union. That similar conditions or even worse will sooner or later prevail in this Colony, with its wider extent of highly malarious country and its smaller European population, there is not the slightest doubt, unless steps are early taken to control and prevent their arising.

With one or two notable exceptions, mining companies and employers of labour are still inclined to be neglectful in the application of anti-malarial precautions, such as mosquito proofing of dwellings, surface drainings, cutting of surrounding scrub in their mining camps and compounds.

The Importation and Distribution of Quinine at cost price or free has been continued as in previous years, the price to those in a position to pay being fixed at 3s. 6d. per bottle of 100 tablets of five grains of hydrochloride of quinine.

The total number of bottles issued from this Department during the year was 14,364 bottles, as against 11,754 bottles in 1928, showing an increase of 22.2 per cent.

Blackwater Fever.—The incidence of blackwater fever remains much the same as last year, there being 23 admissions to general hospitals in 1929 as against 24 in 1928. The deaths registered were four, being the same as in 1928.

Compulsory notification of blackwater fever has not been enforced, and it is difficult to say just how many cases occur in the Colony annually.

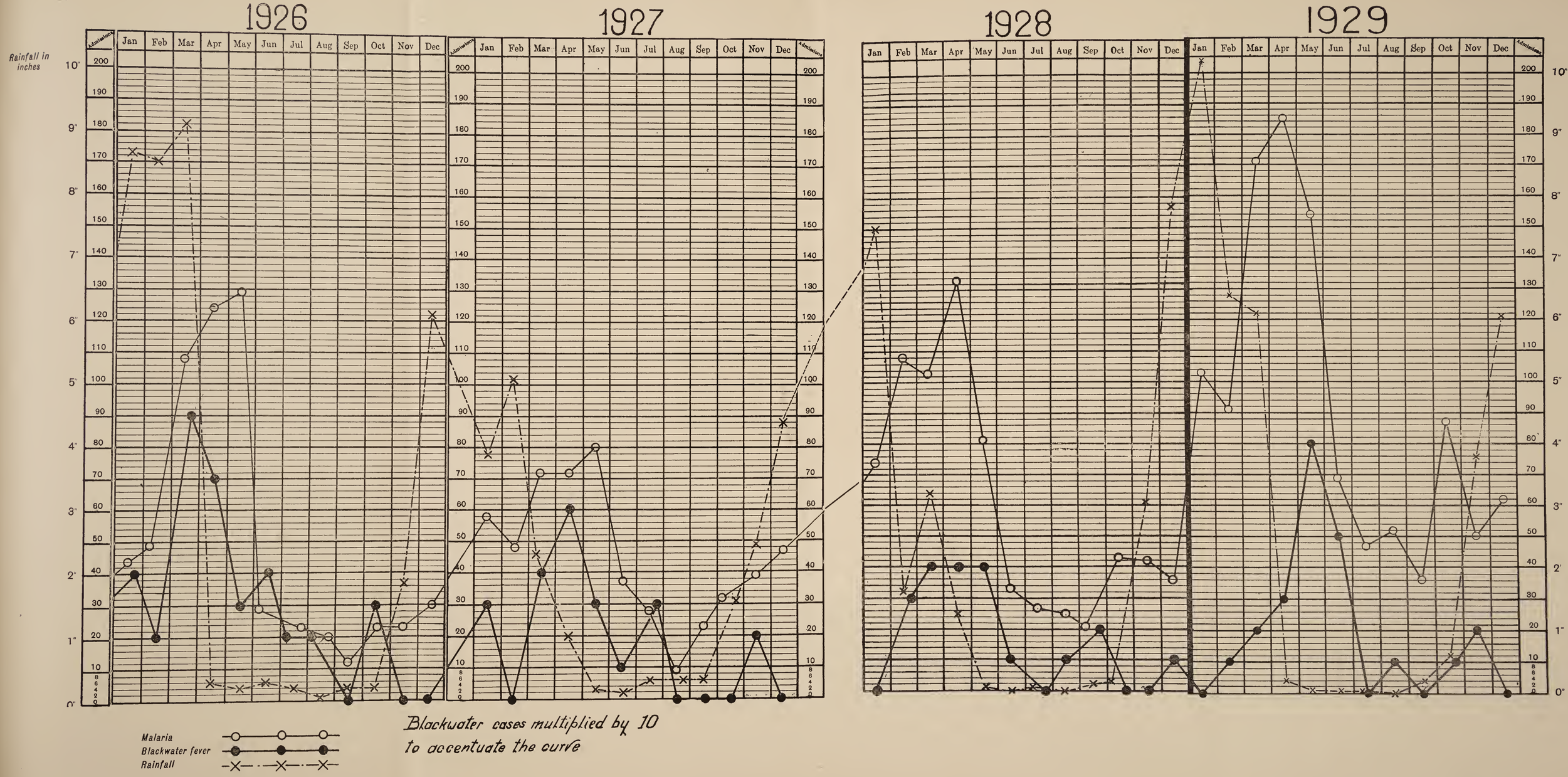
Investigations carried out by Dr. Ross, the Research Fellow from the London School of Hygiene and Tropical Medicine, ceased at the end of May and he returned to England. His results will be embodied in a full report which he is now compiling.

The following table gives the number of cases admitted to general hospitals and the death rate per cent. since the year 1914:—

Year.	Number of cases of blackwater admitted to hospital.	Number of deaths in hospital.	Mortality rate per cent.
1914	53	13	24.53
1915	62	16	25.81
1916	35	6	17.14
1917	48	13	27.08
1918	36	11	30.56
1919	37	7	18.92
1920	75	10	13.33
1921	53	6	11.32
1922	49	14	28.57
1923	64	14	21.88
1924	20	1	5.00
1925	51	13	25.49
1926	36	11	30.56
1927	36	13	36.11
1928	24	4	16.50
1929	23	4	17.35
	702	156	22.22

Pneumonia.—The sickness rate for pneumonia fell by approximately 30 per cent., both amongst Europeans and natives, in 1929 as compared with 1928.

CHART SHOWING NUMBER OF CASES OF MALARIA AND BLACKWATER FEVER, WITH RAINFALL IN RHODESIA



This disease is the cause of far more sickness and deaths amongst the native population than almost all other diseases put together, and is quite the most serious problem affecting the health of the natives in employment in Southern Rhodesia; its seasonal recurrence in epidemic waves is usually associated with outbreaks of catarrhal influenza, the peak months being generally in the spring of the year, i.e., September and October.

It is possible that the practical cessation of the tobacco industry in many parts of the country had some bearing on the reduction in the number of cases of pneumonia this year, as it was noticed in those years when the tobacco boom was at its height that natives engaged in tobacco grading suffered extensively from acute lobar pneumonia, which was indirectly traceable to their employment.

The following table gives the admission rate for the last six years on account of pneumonia, broncho-pneumonia and bronchitis.

Year	Pneumonia				Broncho-pneumonia				Bronchitis			
	Europeans		Natives		Europeans		Natives		Europeans		Natives	
	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths
1924	69	16	381	117	12	3	25	4	47	—	48	7
1925	64	16	379	99	6	3	8	—	66	4	115	3
1926	82	18	898	296	5	1	12	3	70	4	91	5
1927	90	9	796	240	9	1	16	3	74	3	119	3
1928	109	22	1,003	295	20	3	16	10	71	5	82	3
1929	79	13	732	230	21	3	22	8	71	2	65	5
	536	99	4,385	1,346	76	14	101	28	436	21	576	26

Tuberculosis.—The provision of separate hospital accommodation for patients suffering from pulmonary tuberculosis, whether in a communicable form or not, is a matter which will sooner or later demand serious consideration; in the meantime cases are admitted and nursed in our general hospitals at considerable inconvenience to the staff and to the patients and to the detriment of the hospitals themselves, in that they are usually chronic cases and occupy beds which are badly required for other and more urgent purposes.

There were 38 new cases admitted to the European wards during the year, as compared with 48 in 1928, and 122 admissions to the native wards, as compared with 166 during the previous year.

The deaths registered in the Colony were 12 Europeans and 66 natives, as compared with 22 Europeans and 103 natives in the previous year.

Pseudo-Typhus or Rhodesian Ten-Day Fever.—This disease, which has been recognised for over 17 years, has only begun to attract attention in the last five or six years. According to our present knowledge, its distribution in the Colony is limited almost entirely to Salisbury and its immediate neighbourhood, but during 1929 two cases were recognised in Umtali, and it is possible that the distribution is considerably wider than has so far appeared, due largely to lack of recognition.

The nomenclature applied to it cannot be considered very happy, pseudo-typhus being hardly a suitable name for a disease which has little in common with epidemic typhus in temperate climates; nor is Rhodesian ten-day fever much better, as many cases continue for twelve days or longer, and to label it Rhodesian is even more inaccurate, as the disease has been fully and faithfully described as occurring in the Sudan and other parts of

the African continent. A suitable name might be African exanthematic fever, the name used for the similar disease recently reported in Marseilles being Mediterranean exanthematic fever.

At the present time our knowledge of the disease is mainly clinical, such laboratory examinations as have been done being too few in number to warrant dogmatic statements.

Aetiologically, it is unlikely that lice, the vector of epidemic typhus, are involved. The incidence is sporadic with no tendency to spread direct from patient to patient, and most of the patients are in comfortable circumstances, living under the best conditions. There is some evidence that the fruit bat has some causal connection, but scientific proof is lacking.

Clinically, there is a sudden onset of fever, with severe headache; on the second day an area, usually circular, about one-third inch in diameter, becomes very painful and an eschar forms. The nearest lymphatic group is swollen and painfnl. On the fourth day, occasionally the fifth, a typhus-like rash appears; this varies in intensity, and the sites in order of appearance are not constant. When fully developed, the face, the palms of the hands and the soles of the feet are involved, as well as the trunk. The rash is usually macular and is rarely petichial.

The temperature from the commencement is high—102 degrees F. to 104 degrees F.—and of a continuous remittent type. Termination is by rapid lysis in most cases. Pains in the joints with synovial effusion are frequent and affect the median joints mainly. Convalescence is rapid and complicated only by residual muscular and joint pains.

No therapeutic measure so far exhibited has any effect whatsoever on the course of the disease, and hitherto the mortality has been nil.

Laboratory work has not been very extensive to date. The results so far show that the Weil-Felix reaction is negative, but this may be due to lack of the proper strain of *B. proteus*. Guinea-pig inoculation is ineffectual.

The resemblance between some features of this disease and Tsutsugamushi fever makes it appear possible that a mite may be the vector, but considerable investigation is required before its exact position in the "typhus" group can be ascertained.

Ankylostomiasis or Hookworm Disease.—Attention has been drawn to the extent to which alien natives from North-Eastern Rhodesia and Nyasaland coming into this Colony seeking work are affected with hookworm, and during the year investigations were undertaken of an intensive nature to determine, if possible, to what extent these labourers were infected.

From 92 specimens from alien natives examined it was found that 75 were positive, showing the ankylostomiasis ova, and it was further demonstrated that the percentage of positives grew less with each year of residence in this Colony, usually disappearing in about three years. Of the indigenous natives, the only definite knowledge we have at present is that in parts of the south Melsetter district bordering on the Sabi River this disease is endemic, but the figures so far do not show it to be widespread or to be very serious. The particular helminth so far incriminated is *A. duodenale.*

In view of the information obtained from these figures it has been decided that all alien natives entering the Colony from the neighbouring northern territories shall be treated at the port of entry with an efficient vermifuge. At the same time investigations are being continued to determine more exactly if there are other areas in Southern Rhodesia where the disease is endemic.

The necessary regulations under the Public Health Act have now been published and the vermifuge prescribed officially laid down.

Bilharzia.—The routine survey of school children for schisostome infestation which was commenced last year was continued throughout 1929, the schools examined being Milton High School for boys at Bulawayo and the Shamva Public School; 262 examinations were made, of which 17 were found to be positive, giving a percentage of 6.5, this closely approximating to the results of the previous survey, which was 6.98 per cent. That

bilharzia infection is more prevalent than is commonly believed there is little doubt, and the warnings that have been broadcast regarding the danger of bathing in streams and rivers throughout the Colony should be taken more seriously to heart and acted upon.

During the year a report on bilharzia infection of the native children attending the American Mission school at Old Umtali was investigated by the Government Medical Officer of the district, when it was found that the natives attending the girls' school were heavily infected, whilst the boys attending the boys' school, who had a separate bathing place, escaped. The stream in which the girls bathe being the only one infected. *Bilharzia hæmatobium* is the variety most commonly found in Southern Rhodesia, and infection of *Sch. mansoni,* though met with, is uncommon. There were 7 European and 16 native cases admitted to general hospitals for treatment for this complaint during the year.

Leprosy.—The Government Leper Settlement at Gomohuru was placed this year, for the first time, under the charge of a resident medical superintendent, the officer appointed being Dr. Moiser, who came to us with considerable previous experience in leprosy on the West Coast of Africa. The appointment to date has been more than justified, and the lepers at the settlement are now under the systematic treatment and care of their own medical officer. There are two other leper treatment centres, namely, one in connection with the Swedish Mission at Mnene and the other at Mtoko. The numbers of cases under treatment at these various institutions during the year were as follows:—

Gomohuru	257
Mnene	78
Mtoko	173
	508

The reports received on the results of treatment were, on the whole, satisfactory, especially as regards the relief of symptoms, the healing of open sores, and the general improvement in condition. Almost all the patients testify to an increase of strength and a general feeling of well-being whilst under treatment. With regard to the number of permanent cures effected, here the results are not quite so definite, but it is too soon yet to draw any conclusion, and we are not in a position to say more than that the results to date are promising.

The introduction of the use of Alepol in addition to, or in place of, Hydnocreol has given satisfaction, and is now the drug most in use at all treatment centres.

The proportion of voluntary admissions to these leper institutions is on the increase, and this has been made a reason for urging certain alterations in our leprosy repression laws, which would allow of more freedom of movement to declared lepers, with the ultimate object of abolition of compulsory segregation. I do not think, however, that either public opinion or the lepers themselves, most of whom are indigenous natives living a communal life in their kraals, are educated to that pitch which would admit of such drastic reform, nor are the results of treatment sufficiently conclusive to allow of it being said that infective cases can be turned into non-infective within any definite period of time, and this is in spite of claims which have been advanced in all honesty, I believe, by certain people who are deeply interested in the control and eradication of leprosy in the British Empire and who are generously devoting their lives and their resources to this object.

The voluntary treatment centre at Mtoko, which is purely experimental, has not been in existence on its present basis for a sufficiently long time for us to say whether voluntary as against compulsory segregation of native lepers is the proper course to adopt in dealing with an ignorant and illiterate people leading an entirely communal existence, and it is doubtful if any satisfactory answer can be given to this till there has been in operation for

some time some method of following up cases and of tracing the conveyance of infection in the kraals, the cost of which would be altogether prohibitive at the present. In the meantime this institution at Mtoko is doing excellent work in providing a haven and skilled treatment for large numbers of suffering humanity who could not otherwise have been got at and who would have remained in their kraals, a misery to themselves and a menace to their families. I am glad to say that up to the present they seem quite resigned to remain at the institution, and have shown no desire to leave and return to their homes. At this clinic settlement they are allowed considerable freedom, have their own gardens, live their own lives, and altogether the conditions under which they live are infinitely better than those in their own homes.

Venereal Disease.—Clinics for the treatment of venereal disease have been established at various places throughout the country, and the following table gives the number of cases treated during the year at these treatment centres:—

Place.	Authority.	Cases treated.
Bulawayo	Town Council	42
Salisbury	Town Council	275
Mnene / Masasa — Belingwe	Swedish Mission	708 / 678
Gatooma	Government	542
Que Que	Globe & Phoenix Mine	68
Bikita	Government	334
Morgenster	D.R. Mission	535
Ndanga	Government	10
Mtoko	Nyaderi Mission	11
Enkeldoorn	Wreningham Mission	50
Goromonzi	Government	191
Buhera	Government	173
		3,617

In addition to the above, 559 cases of venereal disease were treated at police camps and by Government Medical Officers in the course of their duties, whilst the number of tests carried out for venereal disease at the Government Public Health Laboratory for hospitals, treatment centres and private practitioners amounted to 848.

The sum expended on the importation of anti-syphilitic remedies during the year amounted to £1,550, this being over and above payments made to local bodies under the Public Health Act, to missionary bodies, and for the establishment and maintenance charges of Government clinics.

The total cost last year of anti-venereal measures amounted approximately to £4,700.

Local authorities in the larger towns are paying more attention to this important public health problem, especially where it applies to the native in domestic service. They are falling more and more into line as regards the establishment of centres for the treatment of these cases, and for this purpose are taking more advantage of the provisions of the Public Health Act, whereby the greater part of the expenditure incurred is refunded to them by the Government. Gradually local authorities are abandoning the standpoint, which many of them maintained, that the treatment of venereal disease was a national matter, and that the onus of the search for and the treatment of these diseases was the duty of the central Government and not of the local authority. The increase in native prostitution, and consequently of venereal disease, in the neighbourhood of towns and mining camps has been noticeable, and the greatest difficulty still continues to be experienced in controlling travelling native prostitutes, who have no fixed abode, but wander from town to town and from mine camp to mine camp, sometimes by rail and sometimes on foot, and even by motor car. Probably the worst feature of this evil is the ease with which these women make money, and their comparative wealth, which is attracting a large number of women and young girls from the neighbouring reserves and villages, and it is not yet

clearly recognised to what extent this evil practice has grown and how essential it is that early action should be taken to check, if possible, a practice which is leading to the spread of venereal disease amongst our natives in employment. A Departmental conference has now been arranged to consider this subject and to report to the Government what steps, if any, it may be possible to adopt to control this traffic.

The results of treatment at the various clinics continue to be satisfactory, and to earn the gratitude of the infected persons, especially the men, who are presenting themselves in increasing numbers for treatment. It is regrettable that the difficulty of getting into touch with the infected women should be such a stumbling block as it is at present.

Frambœsia or Yaws.—This disease in the districts in which it occurs continues to complicate the returns of the various venereal disease centres owing to the similarity in its manifestation and its treatment. The difficulties of diagnosis between this and syphilis have not become any easier in spite of recent research, and it is hard to say exactly what cases are due to syphilis and what to yaws, especially when they have reached their tertiary stage.

For the most part, yaws in Southern Rhodesia is endemic in the lower and hotter parts of the Colony, with a tendency every now and then to become epidemic. An epidemic of this nature was reported this year in the native villages in the Zambesi valley to the north of the Sebungwe, where a concentration camp for the mass treatment of these cases was formed some 100 miles north of the Native Commissioner's station at Gokwe. Here the medical arrangements were placed under the care of Dr. Mackenzie of Gatooma, the Native Department undertaking the arrangements for the concentration of the infected, their feeding and dispersal after treatment. This temporary concentration camp, though experiencing many difficulties at the start, proved in the end a great success and the results obtained were most encouraging. Altogether about 350 patients presented themselves for treatment, which, after a search of the kraals by native messengers, was reported to include practically all the infected persons in the native reserves concerned.

The drugs administered were stovarsol and kharsulphan.

This concentration camp was closed down on the advent of the rainy season, but will be re-opened in 1930, as soon as the rains will permit, as the reports recently received state that although those who had been under treatment had remained free from further manifestation, numerous further cases were now occurring.

REPORT ON MEDICAL EXAMINATION OF NATIVES FOR THE YEAR ENDED 31st DECEMBER, 1929.

Salisbury.—

Number of medical examinations			15,176
Number of vaccinations performed			5,358
Representing 353.05 per thousand of total examined.			
Venereal disease	228	percentage	1.50
Other infectious or contagious diseases			114

Bulawayo.—

Number of medical examinations			7,679
Number of vaccinations performed			1,137
Representing 148.3 per thousand of total examined.			
Venereal disease	42	percentage	0.55
Other infectious or contagious diseases			4

Umtali.—

Number of medical examinations			5,400
Number of vaccinations performed			1,020
Representing 188.9 per thousand of total examined.			
Venereal disease	11	percentage	0.204
Other infectious or contagious diseases			7

Goromonzi Venereal Disease Clinic.—This clinic has been entirely re-built during the year on a new site, and is now the centre for the treatment of venereal disease in natives from the Salisbury district.

The work here has considerably increased, and during the year 161 males and 30 females were treated.

CHAPTER V.—HOSPITALS AND ASYLUMS.

There were 12,187 admissions to the general hospitals in 1929, compared with 11,132 in 1928 and 9,409 in 1927; of these 5,041 were Europeans and 7,146 were native and coloured. European admissions increased by 46 and native and coloured by 1,009. The rise in native admissions is gratifying, in that it is an index of the gradually increasing desire for European medical methods on the part of the natives.

The curve of the seasonal incidence of admissions for Europeans showed one main peak in April, and a lesser one in October, which was the main peak in 1928. The lowest point was in February. For natives, October was the highest month by over 100 cases, and February the lowest, whilst in 1928 the peak month was August and the minimum May.

Salisbury Hospital.—The work done during the year again shows an increase on the European side, admissions being 1,895, as compared with 1,834 in 1928 and 1,570 in 1927. Out-patient attendances, including massage cases, have reached the total of 2,573.

In the native section there is a slight decrease in admissions to be recorded, viz., 1,560, as against 1,618 in 1928; the 1927 figure was 1,527. Native out-patient attendances totalled 839 in six months (July-December). In the X-ray department 665 patients (434 European, 231 native), involving 2,004 films, have been dealt with.

One thousand three hundred and ten operations were performed, being 42 more than in 1928. The major operations were 567, or 163 more than the previous year, whilst the minor were ~~117~~ 121 less than during that period.

During the year a new boiler was installed, capable of supplying all parts of the hospital as well as the Public Health Laboratory with a most satisfactory steam supply.

The new Asiatic block of six beds and two cots, consisting of two wards, with verandah, bathrooms and conveniences, has been built, and will be opened early in 1930.

Plans have been prepared, and building should soon commence, on the enlargement of the nurses' home, which, when finished, will set free the house in North Avenue for the surgeon-in-charge.

Plans are also under discussion for a new children's block, by means of which the accommodation for babies and young children will be doubled, and, by vacating the wing at present in use, give a 75 per cent. increase in the number of beds available for females in the general wards.

Much needed extensions to the kitchen are also receiving attention, and work will commence as soon as possible.

Memorial Hospital, Bulawayo.—Admissions during 1929 numbered 1,451 Europeans, as compared with 1,471 in 1928, and 1,869 natives, as compared with 1,730 in 1928; being a decrease of 20 Europeans and an increase of 139 natives.

The total number of operations performed was 875, a decrease of 20 on the previous year's figure. This figure 875 was made up as follows:—

Europeans: Major, 334; minor, 396.

Natives: Major, 47; minor, 98.

In the X-ray department 882 cases (755 Europeans and 127 natives), involving 2,531 films, were dealt with.

The out-patient department has been more fully developed during the year, attendances reaching a record of 1,990.

During the year a new kitchen with pantries, store-rooms, etc., was built, also a new dining-hall for the nurses. The new boiler has been in use most of the year, and the hospital's steam supply is now ample for all needs.

Negotiations have been continued with regard to the re-building of the hospital, plans for which have been commenced. The main difficulty, not yet surmounted, has been that of site. The previously selected site was refused, on consideration of sewerage and other grounds, by the Town Council. After much discussion it was decided that the hospital would be kept on its present site, but would gradually be remodelled in accordance with present-day requirements. Since this decision was taken, however, another suggested site has been advanced by certain interested members of the public, and it looks as if this matter would have to receive even further consideration.

Umtali Hospital.—European admissions 468, as compared with 457 in 1928 and 381 in 1927. Native admissions 396, as compared with 354 in 1928 and 372 in 1927. This is the first year, since 1926, that an increase in native admissions has been recorded.

The operations performed number 180, as compared with 187 in 1928 and 173 in 1927.

Throughout the year, building operations on the new hospital have been pushed forward, and early in 1930 it should be ready for occupation. The accommodation then available will be 38 European beds, divided into male, female, children's and private wards, and 42 native beds, inclusive of the coloured and Asiatic wards. The hospital building will have a thoroughly modern operating theatre with a scialytic shadowless light installed. The buildings include a new nurses' home for eight nurses; a house for the secretary-dispenser; mortuary and pathological examination room and native servants' compound, and the whole hospital will have its own water-borne sewerage and septic tank. An important feature of the scheme is the provision made for future extensions when such become necessary.

Gwelo Hospital.—European admissions 401, as compared with 440 in 1928 and 314 in 1927. Among the admissions during the year were 23 cases of enteric fever, 21 of which were from rural districts; and 8 cases of diphtheria, also from outlying districts. The native admissions were 658, as compared with 610 in 1928 and 535 in 1927. Two hundred and fifty-four operations were performed—206 in 1928. The question of re-building the native hospital is receiving consideration.

Gatooma Hospital.—283 Europeans were admitted, as against 307 in 1928 and 241 in 1927. Native admissions numbered 823, including 410 in the Native Venereal Disease Hospital. In 1928 the figure was 766, so that the native work in this hospital continues to increase. The venereal disease clinic is doing particularly good work, and popularising treatment on European lines amongst the natives.

Operations performed on Europeans numbered 75, of which 7 were major. This compares very favourably with 45 in 1928. Operations on natives reached 20 major and over 100 minor.

Nineteen confinements took place in the European hospital during the year, but the townsfolk are now opening their own Maternity Hostel, aided by the Government, so that these cases will no longer be admissible in 1930.

Extensive alterations to the septic tank plant have been carried out during the year, thereby adding greatly to the comfort of the institution.

Fort Victoria Hospital.—European admissions numbered 193, as compared with 173 in 1928 and 153 in 1927. Natives admitted numbered 170, as compared with 164 and 146 in the preceding years. This meant that all the native beds were frequently filled, the maximum use being made of the available accommodation.

Sixty-nine operations were performed, 19 major and 50 minor—a 50 per cent. increase on the previous year's figures of 46 (10 major, 36 minor).

Sinoia Hospital.—Admissions, Europeans, 156, being nearly 100 per cent. increase over the previous year's 82. Natives numbered 337, a 50 per cent. increase over 217 in 1928. Operations numbered 53, of which 21 (six major) were on Europeans. The previous year the operations numbered five.

Dr. Carmody assumed charge on the 10th April, the vacancy being due to the much regretted death of Dr. Barratt.

In order to cope with the increased work, the nursing staff has been augmented by one staff nurse.

Numerous improvements have been made to the building and its amenities during the year. The operating theatre has been fully equipped; improvements in the water supply with heating arrangements have been added; new flooring has been laid in the wards and duty room, and a small incinerator installed.

Shamva Cottage Hospital.—Europeans admitted numbered 80, as compared with 93 in 1928 and 97 in 1927. Natives 388; 265 in 1928 and 196 in 1927; nearly 100 per cent. increase in two years. Operations performed numbered 47; in 1928 the figure was 40.

Gwanda Cottage Hospital.—Europeans admitted numbered 70; in 1928 45, and in 1927 39. Native admissions 287, as compared with 243 in 1928 and 134 in 1927. Operations performed, 19. In 1928 operations numbered seven.

Minor alterations and additions have been made to the nurses' home and the hospital.

Enkeldoorn Cottage Hospital.—Admissions, Europeans 62, a decrease of 20 on 1928 figures, and natives 136, an increase of 34 over 1928. Operations performed: 10, being the same number as in the previous year.

On 2nd November the new hospital was opened by His Excellency the Governor. In the new building accommodation is provided for seven European males, two European females, and one private ward, together with operating theatre, dispensary and staff quarters, etc.

Belingwe Cottage Hospital.—Admissions to this hospital have continued to decline, four Europeans and 52 natives being the total for the year, as compared with 11 and 68, respectively, in 1928, and 16 and 106 in 1927. No operations were performed.

In view of these facts, and that there is now a modern hospital at the Shabanie Mine, it has been decided that this hospital will be closed down at the end of the current financial year.

Ingutsheni Mental Hospital.—European admissions 20, natives 63. In all 68 Europeans (44 male, 24 female) and 246 natives (194 male, 52 female) were treated, with a recovery rate per cent., calculated on admissions, of 43.49. The total number of deaths was 20 (two Europeans, 18 natives).

Native accommodation was still further improved, so that now there is adequate room for all classes of patients.

As part of the treatment of the patients, open-air work on the farm attached to the hospital has been found most efficient. Indoor work, also as a part of treatment, is provided in the form of horse-hair and coir mattress-making, which is an economical source of supply of mattresses for other Government hospitals. The total revenue from paying patients and sales of surplus farm products amounted to £1,615, whilst the supplies to the institution from the farm and garden amounted in value to £790, with the result that the cost of maintenance per caput per diem has been even further reduced to 1s. 11½d.

Ndanga Native Hospital.—In-patients during the year numbered 544, being a very considerable increase over the 372 in 1928. Out-patients have correspondingly increased from 935 in 1928 to 1,238 in 1929.

During the latter part of the year, new quarters of two rooms and a verandah were built for the nurse-matron. Ten new huts were provided for patients and additional ones were authorised, but difficulties in obtaining suitable native builders have delayed their construction.

Statistics relating to the principal diseases treated in Government hospitals during the year and other information will be found in Part III. of this report.

CHAPTER VI.—GENERAL.

(1) **The Health of the Native—In Employment on Mines or Other Works.**—The native mining population has further increased from 43,703 to 46,811, deaths from all causes numbering 985 or 21.04 per thousand, this being the highest death rate recorded since 1922.

The following table is a comparative statement of mortality amongst native labourers employed on mines since the year 1906:—

MORTALITY ON MINES.

Comparative Statement of Mortality amongst Native Labourers employed on Mines since 1906.

Year.	Average number employed.	Disease.		Accident.		All causes.	
		Number of deaths.	Death rate per mille per annum.	Number of deaths.	Death rate per mille per annum.	Number of deaths.	Death rate per mille per annum.
1929	46,811	875	18.69	110	2.35	985	21.04
1928	43,703	756	17.30	94	2 15	850	19.45
1927	42,046	595	14.15	94	2.24	689	16.39
1926	42,047	598	14.22	91	2.16	689	16.38
1925	39,644	505	12.74	105	2.65	610	15.39
1924	41,372	665	16.07	89	2.15	754	18.22
1923	37,936	504	13 28	105	2.77	609	16.05
1922	36,289	681	18.77	86	2.37	767	21.14
1921	37,694	689	18.28	94	2.49	783	20.77
1920	37,890	599	15.81	75	1.98	674	17.79
1919	31,099	507	16.30	90	2.90	597	19.20
1918	32,784	3,629	110.69	88	2.69	3,717	113.38
1917	39,158	700	17.87	149	3.81	849	21.68
1916	40,749	911	22.36	172	4.22	1,083	26.58
1915	38,413	832	21.66	159	4.14	991	25.80
1914	36,514	897	24.57	135	3.70	1,032	28.26
1913	33,763	783	23.34	158	4.67	946	28.01
1912	34,669	1,073	30.96	163	4.70	1,236	35.66
1911	37,909	1,085	28.62	164	4.33	1,249	32.95
1910	37,826	1,682	44.47	182	4.81	1,864	49.28
1909	32,721	1,383	42.27	161	4.92	1,544	47.19
1908	30,865	1,397	45.26	132	4.28	1,529	49.54
1907	26,098	1,486	56.94	102	3.91	1,588	60.85
1906	17,381	1,153	66.91	157	9.03	1,320	75.94

Note.—Prior to 1912 the numbers employed are based on the average numbers employed during each month of the year. From 1912 onwards the labour employed is based on the average of the actual numbers employed at the end of each month during the year.

MORTALITY ON MINES.

Annual Territorial Summary showing Mortality amongst Native Labourers for the Year ended 31st December, 1929.

Territorial classification.	Average actual number employed at the end of each month.	DEATHS.																Death rate per mille per annum.					
		Malaria.	Scurvy.	Syphilis.	Pneumonia.	Phthisis.	Other diseases of the chest.	Dysentery.	Diarrhœa.	Other intestinal diseases.	Heart disease.	Debility.	Influenza.	Other diseases.	Total diseases.	Accidents.	Totals.	Disease.		Accident.		All causes.	
																		1929.	1928.	1929.	1928.	1929.	1928.
Southern Rhodesia	12,645	4	...	...	71	5	2	4	...	4	...	4	5	21	120	23	143	9.49	10.89	1.82	1.97	11.31	12.86
Portuguese E. Africa	4,055	2	...	...	48	8	5	3	2	3	3	1	...	21	96	8	104	23.67	20.58	1.97	1.34	25.64	21.92
Northern Rhodesia	13,875	19	3	1	158	13	9	5	1	12	8	3	7	48	287	34	321	20.68	16.25	2.45	1.91	23.13	18.16
Nyasaland ...	15,156	18	1	5	192	17	15	9	1	5	14	2	2	59	340	40	380	22.43	21.84	2.64	2.85	25.07	24.69
Other sources ...	1,080	5	...	...	14	1	1	...	...	4	...	1	3	3	32	5	37	29.63	42.88	4.63	...	34.26	42.88
Totals ...	46,811	48	4	6	483	44	32	21	4	28	25	11	17	152	875	110	985	18.69	17.30	2.35	2.15	21.04	19.45
Class of work—																							
Underground :																							
Machines : drills	1,709	1	...	...	29	2	1	...	...	...	1	1	...	7	42	15	57	24.58		8.77		33.35	
Hammer boys ...	6,205	3	1	...	64	7	3	3	2	2	2	1	2	14	104	25	129	16.76		4.03		20.79	
Trammers & lashers	6,675	15	1	...	112	6	2	8	1	1	1	2	4	23	176	28	204	26.37		4.19		30.56	
Other underground	6,471	5	...	1	33	6	4	...	...	5	3	...	4	23	84	17	101	12.98		2.63		15.61	
Surface :																							
Mill and reduction plant ...	5,425	3	...	2	103	6	6	...	1	2	1	...	...	16	140	4	144	25.81		0.74		26.55	
Other surface ...	20,326	21	2	3	142	17	16	10	...	18	17	7	7	69	329	21	350	16.19		1.03		17.22	
Totals ...	46,811	48	4	6	483	44	32	21	4	28	25	11	17	152	875	110	985	18.69		2.35		21.04	

Not available.

Not available.

Not available.

The following table shows the number of cases of sickness, number of deaths, case mortality per cent., sickness incidence per mille per annum and death rate per mille per annum amongst native labourers employed on mines for the year ended 31st December, 1929 :—

Disease.	Total sick.	Sickness incidence per mille per annum employed.	Total deaths.	Case mortality per cent.	Death rate per mille per annum employed.
Malaria	3,971	84.83	48	1.21	1.02
Scurvy	166	3.55	4	2.41	0.09
Syphilis	645	13.78	6	0.93	0.13
Pneumonia	2,220	47.42	483	21.76	10.32
Phthisis	54	1.15	44	81.48	0.94
Other diseases of the chest ...	2,560	54.69	32	1.25	0.68
Dysentery	210	4.49	21	10.00	0.45
Diarrhœa	644	13.76	4	0.62	0.09
Other intestinal diseases ...	272	5.81	28	10.29	0.60
Heart disease	44	0.94	25	56.82	0.53
Debility	207	4.42	11	5.31	0.23
Influenza	3,014	64.39	17	0.56	0.36
Other diseases	3,965	84.70	152	3.83	3.25
Minor ailments	15,961	340.97	...	...	...
Total diseases	33,933	724.90	875	2 58	18.69
Accidents, major	238	5.08	110	46.22	2.35
Accidents, minor	12,899	275 55	...	...	...
Totals	47,070	1,005.53	985	2.09	21.04

The average of the actual numbers employed at the end of each month was 46,811.

COMPARATIVE STATEMENT OF MORTALITY AMONGST NATIVE LABOURERS EMPLOYED ON MINES, JANUARY TO DECEMBER, 1929.

Month.	Actual numbers employed	Disease		Accident		All causes	
		Deaths	Death rate per 1,000 per mensem	Deaths	Death rate per 1,000 per mensem	Deaths	Death rate per 1,000 per mensem
January ...	45,342	91	2.01	12	0.26	103	2.27
February ...	45,639	82	1.80	17	0.37	99	2 17
March ...	45,206	65	1.44	12	0.26	77	1.70
April ...	46,204	54	1.17	7	0.15	61	1.32
May ...	46,573	58	1.24	5	0.11	63	1.35
June ...	47,357	57	1.20	3	0.06	60	1.26
July ...	48,561	39	0.80	7	0.15	46	0.95
August ...	48,603	75	1.54	8	0.17	83	1.71
September ...	48,385	101	2 09	13	0.27	114	2.36
October ...	47,707	93	1.95	8	0.17	101	2.12
November ...	46,837	84	1.79	8	0.17	92	1.96
December ...	45,319	76	1.68	10	0.22	86	1 90

The increased sickness and mortality rates amongst the native miners have given rise to considerable apprehension, and during the year a Departmental enquiry was instituted to examine the position. This enquiry brought out the following facts:—

(1) that the indigenous natives were not severely affected;

(2) that the only cause of increased mortality was pneumonia;

(3) that the pneumonia cases were practically confined to alien natives from northern neighbouring territories during their first quarter's service;

(4) that, roughly, the mortality was highest on those mines which were recruiting alien labour most rapidly.

On these facts, investigations were commenced in order to study the factors which led to this susceptibility of alien natives to pneumococcal infection.

The first line of investigation was the general state of health of the natives on reporting for work at the mines. Ordinary physical examination revealed little of importance, but a special study of the stools of a batch of newcomers revealed 74 per cent. to be infected with hookworms. A study of the blood of those infected revealed 63 per cent. to be sufferers from severe anæmia, presumably due to the presence of the hookworm in their intestines.

Corroboration of these figures was obtained by studying the stools of alien natives admitted to the native wards of Salisbury Hospital; of the aliens with less than six months' residence in the Colony, 90 per cent. were infested with the same parasite. Hookworm infestation is known to be a fruitful cause of general ill-health and of lowered resistance to other diseases.

Therefore arrangements are now being concluded whereby all alien immigrants shall be treated with carbon tetrachloride, an efficient and cheap vermifuge.

Other lines of investigation are still being pursued, and it is hoped that the results will be a markedly decreased mortality rate in 1930.

Although the numbers of native labourers in employment have increased, the decrease in the numbers of employers continues.

The number of employers rendering returns at the 31st December was as follows:—

Province.	1925	1926	1927	1928	1929
Matabeleland	197	183	183	182	161
Mashonaland	179	149	120	107	129
Total .	376	332	303	289	290

The sizes of properties at the 31st December, 1929, compared with the four years 1925-28, are indicated by the following table:—

Mines employing	1925	1926	1927	1928	1929
2,000 natives and over ...	2	2	2	4	3
1,500 „ „ ...	3	3	3	2	2
1,000 „ „ ...	4	5	5	2	2
500 „ „ ...	6	5	5	7	11
400 „ „ ...	2	2	2	6	5
300 „ „ ...	5	3	4	7	11
200 „ „ ...	6	12	13	14	12
100 „ „ ...	44	44	38	37	36
50 „ „ ...	77	69	64	69	66
25 „ „ ...	80	66	69	49	59
Under 25 natives ...	147	121	98	92	83
Total ...	376	332	303	289	290

These figures differ slightly from those previously published, as allowance has been made for returns referring to the month of December, but which were not received until later.

From the public health point of view, this gradual elimination of the small compounds and the cencentration into larger camps, whilst not without special problems, is all to the good. The larger companies are better able to house and maintain their native workers and they also provide a resident medical officer, whose duties are practically confined to curative medicine and the hygiene of their properties.

(2) **Medical Facilities for Natives.**—There is a continued demand for the extension of medical facilities to natives, not only confined to missionary bodies and persons interested in the social welfare of the indigenous native races, but also on the part of the natives themselves, a striking commentary on their advance in the social scale. The provision made for indoor and outdoor medical relief of natives includes the provision of beds in general hospitals, special hospitals for native employees on mines, mission hospitals in the reserves, dispensaries for outdoor relief maintained by the Government or by missionary societies, special clinics and treatment centres for venereal disease and yaws.

Grants-in-aid to missions for hospitals and medical mission work now amount to £1,458. Fort Usher has been selected as the site for a new native hospital and dispensary for the Matopo native district to be erected by the trustees of the late Wm. Lees in accordance with the terms of his will. This hospital will be financed by the trustees to the extent of their resources, the balance being met by the Government. It is proposed to establish a hospital, outdoor dispensary and venereal disease treatment centre here under the charge of a trained nurse, the Government Medical Officer from Bulawayo to visit periodically or when required.

The chief drawback in establishing out-dispensaries for native relief has been the difficulty in obtaining suitably educated native dispensers and dressers who are competent to carry out this work, even under European supervision, and an experiment is being tried this year of importing native hospital orderlies from Nyasaland who have undergone a course of training in the mission hospitals there and have reached a standard of efficiency very much in advance of what is yet obtainable in this Colony. A medical station as outlined has been established at Mount Darwin, and here the native orderly is under the Native Commissioner of the district, and is visited periodically by the medical officer of Shamva; and other stations of a similar character are now in contemplation, the intention being to extend this system considerably should it prove successful.

Proposals have been made that the Government should establish a supernumerary medical service, the members of which should devote their time to medical attendance on the native in the reserves. There are, however, many difficulties in the way of any such differentiation of medical services, not the least being the difficulty of finding the medical officers for the work, who, moreover, would have to be paid at a higher rate than members of the existing service who are in receipt of compensating privileges in the shape of private practice.

(3) **Sanitary Control by Local Authorities.**—In the larger towns night soil and refuse disposal, storm water drainage and sanitation generally have received the attention from the local authorities that such important public services demand. In Bulawayo and Salisbury extensive schemes are on foot for furnishing improved water supplies, coupled with a water carriage sewerage to embrace in the first place the central portions of these towns. Lighting and roadmaking are also receiving their proper share of attention, and in these respects the larger towns of this Colony are well in the front rank. That the same enlightened conditions are not yet applicable to the smaller towns and villages is largely due to the limited communities in these places being quite unable to bear the financial burdens which such services entail.

The attention of local authorities is yet required in the direction of town planning, the limiting of overcrowding in certain areas, and the better control of native locations. There has been a commendable desire on the part of town councils to extend their permanent staffs by the addition of expert medical officers of health and sanitary inspectors, all of which is to the advantage of the communities concerned, assisting as it does in more enlightened and modern methods in the control of the public health.

(4) **Housing and Town Planning.**—Certain sections of the Public Health Act provide for the control and supervision by the Government of all plans for towns and villages which may be surveyed on private land, and a small Departmental committee has been set up by the Minister concerned to advise the Government on the planning and lay-out of private townships and villages, mostly in the neighbourhood of the larger towns. This committee, which can only act temporarily in the absence of any Town Planning Act, the preparation of which is now under consideration, advises the Government as to the suitability of the general lay-out, with special reference to the reservation of adequate land for public purposes, the width of roads, street drainage, the adequacy of the facilities for night soil and refuse collection and disposal, the provision of trade sites, and the reservations made for dwellings for native and coloured races, all of which are apt to be forgotten by the owning party or syndicate, whose only concern is the sale of the land to the best advantage without thought for the future.

(5) **Maternity and Nursing Homes.**—Maternity homes, supported by public subscription or otherwise, maintained for the benefit of the public and not for individual profit, again obtained grants-in-aid from the Government, and, in addition, received substantial monetary assistance from the Beit Railway Trust Maternity Grant. The inauguration of this extremely generous provision by the Beit Railway Trustees, which practically provides for the refund of all deficits, has placed maternity hostels in Southern Rhodesia in an extremely strong position, and they should no longer be hampered in their work by any fear of lack of funds.

On the completion of the new Government hospital at Enkeldoorn, the old building was handed over to a local committee, and it has been re-opened as a maternity home for the benefit of the village and district.

The people of Gatooma, after holding out against it for some time, eventually agreed, with the Government's assistance, to provide a maternity hospital there, and this was opened towards the end of the year. Bulawayo has also at last decided to embark on a very complete scheme for the provision of a maternity hospital in keeping with the demands of the town and district, and with the completion of these three additional maternity homes there should be an ample number of beds for maternity cases in Southern Rhodesia, so far as it applies to the European section of the community.

Except at the various mission hospitals, no special provision is yet made for abnormal coloured and native maternity cases which may require special or operative treatment, and these, when occasion demands, are still admitted to the wards of the general hospitals. So long as adequate provision can be made for cases of difficult labour, which threaten the life of the child or the mother, there is little reason for lying-in hospitals for normal cases of childbirth in native women. To make such a provision would entail an enormous expenditure, whilst the benefits accruing would be doubtful.

Regulations have been framed under the Public Health Act, providing for the registration and inspection of maternity and nursing homes in the Colony, and it is anticipated that these will shortly be presented for Ministerial sanction. The grants paid by the Government to maternity and nursing homes during the year amounted to £4,435, which includes grants towards capital expenditure in the shape of new buildings and extensions and additions to existing buildings.

(6) **Child Welfare.**—Public interest in infant and child welfare continues to develop and there are now two child welfare societies operating in the Colony, both of which are doing excellent work through the medium of their local committees and their highly-trained and most efficient health visitors. The maternity and child welfare clinics have been well attended and special clinics have been set up this year for coloured and Asiatic mothers. Valuable work is also being done by these societies in providing milk and other food for needy cases, house to house visitation, and the giving of ante-natal advice to mothers, whilst a special "babies' home" was opened this year in Salisbury, as a branch of the Rhodesia Children's Home. These societies are in receipt of grants-in-aid from the Government and the local authorities concerned, and it is hoped that the encouragement given by these grants, plus the excellent reports on the result of their year's work, which both these societies have issued, will induce similar efforts in other centres. Before this comes about, however, it would be desirable if these societies could be combined under a common central council or committee who would be able to co-ordinate the work and consolidate the funds, for the great danger to these scattered and individual associations in the smaller centres is that after a short period of enthusiasm they are liable to extinction, partly from loss of interest, partly from lack of knowledge, and chiefly from lack of funds, a result which would largely be obviated if there were some central body in a position to advise and to assist financially where required.

There are now in existence quite a number of women's societies, whose objects are philanthropic and whose activities are largely devoted to the welfare of women and children. There is a tendency, however, for these activities to overlap, with the result that the objects aimed at, however excellent and deserving of every consideration, are apt to suffer owing to lack of co-ordination of views and difference of opinion as to how the objectives are to be attained, and some common medium for the representation of their views to the proper quarter is badly wanted.

The subjects discussed by these societies during the year and represented both to local authorities and the Government embrace:—The early notification of births; inspection and control of nursing homes; registration of nurses and midwives; the State care of mentally defective children; working hours of girls employed in factories and shops; the subsidising of native dispensaries and clinics in town locations; the provision of playgrounds for children in towns.

A. M. FLEMING,
Medical Director.

PART II.

Report of the Medical Inspector of Schools for the Year 1929.

The Medical Director,
Salisbury.

I have the honour to submit this, my first annual report as Medical Inspector of Schools, relating to the work of the schools' medical and dental services in Southern Rhodesia for the year 1929.

Following on Dr. Gatchell's death, Dr. Annie Clark was the only Medical Inspector of Schools until my arrival on 17th May; she left Rhodesia for England in November, on three months' leave.

Mr. Cyril Fletcher, Schools Dental Surgeon, left Rhodesia in June on three months' leave, prior to his resignation, and his place was filled by two Schools Dental Surgeons, Mr. R. Woodcock, L.D.S., Univ. Sheff., L.D.S., R.C.S., Eng., who took up his duties on 29th July, and Mr. A. Silva Jones, L.D.S., R.C.S., Eng., who was appointed on 15th August.

Great strides have been taken forward during the year under review; during a certain part of the year for the first time two medical inspectors and two dental surgeons were at work in the schools, with the result that more children were medically and dentally examined than in any previous year, and it became possible for visits to be paid to almost all the outlying farm and public schools, and thus a further point was reached in the direction of ensuring that every child in the Colony shall pass through school life adequately protected against the dangers of disease, and trained to appreciate the principles and practice of personal hygiene.

I have found the scholars of Southern Rhodesia less physically sound than they should be, but the defects found at inspection are, among the younger children especially, generally those that can be classified as preventable.

Two conditions in particular have occupied my serious attention, the distressingly high incidence of various defects of posture, and more especially of a flatness and poor expansion of the chest wall, due to a lack of proper use of the respiratory system, and secondly, the fact that more than one out of every five children arrive upon the threshold of school life already suffering with some defect requiring medical or surgical treatment.

In the body of this report the causes of this high incidence of postural defects have been dealt with, and I am convinced that the remedy lies only in more adequate physical education for all children. Drill, in itself, is not enough; in an organised scheme of physical instruction games must play an important part, and exercises, to be of real value, must be carried out daily for at least ten minutes by groups never exceeding twenty children, infused by trained physical instructors with a spirit of keenness and interest in the exercises. For those children who are suffering with a defect of posture, however slight, individual attention is essential, and gymnasia, or at least covered spaces out of doors, will be required for the proper performance of any fruitful scheme of physical education.

Any reduction in the incidence of defects among entrants can only be the result of an increased sense of responsibility and a greater appreciation of the importance of preventive medicine and dental hygiene on the part of the parents; co-operation with the child welfare societies in their work of educating all parents and those who have charge of children along these lines must be our aim in the future.

The addition of five coloured schools to the list of those medically inspected has proved a valuable innovation, but the increase in the scope of the work undertaken by the school medical and dental services during the year has not been confined to inspection only; for, among other activities, a scheme for the refraction testing the eyes of children, especially those attending schools in outlying districts, and for the prescription of glasses where they are found to be necessary, has been started, the enquiry into mental defects has been continued and the important subject of school furniture, with especial reference to desks, has received attention.

The children examined this year comprised:—

1. All pupils 12 years of age and over;
2. New admissions;
3. Children who were found to be suffering with some defect at previous examinations;
4. Special cases recommended by teachers, parents or guardians.

The total number of children examined during the year was 4,875, including 247 special cases, as compared with a total of 3,606 in 1928 and 3,578 in 1927.

Schools Visited.—Below is given in detail the number of children examined during the routine inspection at the various schools visited, together with the number of parents present, represented or absent at the time of the inspection. I have considered it advisable to divide the children into two main groups, "Entrants" and "Others," and the former group includes only those who were medically inspected for the first time in 1929 and who were born in 1920 or later years.

Sixty-nine public and farm schools, twenty-five aided farm schools and the five coloured schools were visited, and it will be seen that each district in the Colony received attention.

TABLE I.

Routine Medical Inspection.

Name of school.	Entrants. Boys.	Entrants. Girls.	Others. Boys.	Others. Girls.	Total. Boys.	Total. Girls.	Grand total.	Parents present	Parents represented	Parents absent
Convent School, Salisbury	1	2	1	106	2	108	110	2	62	46
Prince Edward Senior School	—	—	237	—	237	—	237	29	105	103
Prince Edward Junior School	28	—	124	—	152	—	152	32	49	71
Girls' High School, Salisbury	42	31	—	327	42	358	400	135	129	136
Primary School, Salisbury	16	12	23	49	39	61	100	1	26	73
Arcadia Farm School	1	1	7	3	8	4	12	4	8	—
Avondale Preparatory School	7	13	15	6	22	19	41	12	2	27
Beatrice Farm School	4	2	1	2	5	4	9	9	—	—
Hatfield Preparatory School	4	4	15	11	19	15	34	22	—	12
Hatfield East Preparatory School ...	5	8	9	4	14	12	26	14	—	12
Hillside Preparatory School	8	8	5	4	13	12	25	13	—	12
Marandellas Public School	4	2	9	6	13	8	21	11	4	6
Parktown Preparatory School	9	6	6	8	15	14	29	22	3	4
Shamva Mine Public School	8	5	27	17	35	22	57	33	1	23
Sinoia Public School	3	6	27	16	30	22	52	12	38	2
St. George's College, Salisbury	—	—	111	—	111	—	111	1	80	30
Milton Senior School	—	—	180	—	180	—	180	1	107	72
Milton Junior School	22	—	121	—	143	—	143	24	25	94
Eveline Girls' High School	30	52	2	302	32	354	386	92	162	132
Eveline High School (Pupil Teachers)	—	—	—	12	—	12	12	—	11	1
Bellevue Preparatory School	7	7	12	12	19	19	38	24	—	14
Cement Farm School	2	1	4	3	6	4	10	7	—	3
D'Hoop Farm School	2	—	8	2	10	2	12	3	3	6
Glenville Preparatory School	3	1	7	4	10	5	15	1	—	14
Gwanda Farm School	3	3	14	7	17	10	27	10	—	17
Hillside Preparatory School, Bulawayo	10	8	10	6	20	14	34	17	1	16
Lushongwe Farm School	5	3	5	6	10	9	19	—	5	14
Marula Farm School	—	1	5	3	5	4	9	1	1	7
Matopos School	—	—	29	—	29	—	29	—	—	29
Primary School, Bulawayo	20	28	13	48	33	76	109	—	24	85
Raylton Public School, Bulawayo	16	10	11	2	27	12	39	20	1	18

Name of school.	Entrants. Boys.	Entrants. Girls.	Others. Boys.	Others. Girls.	Total. Boys.	Total. Girls.	Grand total.	Parents present	Parents repre-sented	Parents absent
Sauerstownship Preparatory School ...	7	4	8	4	15	8	23	4	1	18
Technical School, Bulawayo	—	—	74	—	74	—	74	3	36	35
Turk Mine School	4	2	5	2	9	4	13	10	1	2
Wankie Public School	8	10	12	7	20	17	37	9	—	37
Convent School, Bulawayo	43	45	3	67	46	112	158	1	2	155
Convent School, Umtali	7	4	8	20	15	24	39	20	—	19
Umtali High School	31	27	141	117	172	144	316	28	130	158
Old Umtali Farm School	2	—	5	3	7	3	10	8	—	2
Penhalonga Public School	4	2	3	3	7	5	12	6	—	6
Fort Victoria Public School	15	4	23	8	38	12	50	16	5	29
Gath's Mine School	2	1	2	3	4	4	8	5	—	3
Rurgwe Farm School	1	2	8	4	9	6	15	12	3	—
Victoria Plots Farm School	2	3	6	6	8	9	17	8	4	5
Enkeldoorn Public School	3	7	21	26	24	33	57	1	7	49
Vlakplaats Farm School	—	1	13	6	13	7	20	3	3	14
Hartley Public School	6	7	4	18	10	25	35	1	30	4
Eiffel Flats Public School	9	6	11	8	20	14	34	8	—	26
Gatooma Public School	10	7	13	18	23	25	48	18	2	28
Chaplin High School, Gwelo	27	12	96	82	123	94	217	17	113	87
Convent School, Gwelo	10	10	2	44	12	54	66	7	19	40
D.R.C.O. School, Daisyfield	16	5	56	9	72	14	86	—	81	5
De Rust Farm School	1	1	3	7	4	8	12	6	—	6
Hunter's Road Farm School	3	—	3	8	6	8	14	5	—	9
Lalapanzi Farm School	2	3	6	5	8	8	16	10	—	6
Que Que Public School	16	12	12	10	28	22	50	23	4	23
Selukwe Public School	5	3	14	14	19	17	36	5	—	31
Strathfillan Farm School	—	1	5	6	5	7	12	—	6	6
Shangani Farm School	—	2	2	1	2	3	5	—	—	5
Umvuma Public School	2	6	13	17	15	23	38	5	—	33
Whitewaters Farm School	4	5	7	5	11	10	21	—	7	14
Willoughby's Spur Farm School	1	2	9	3	10	5	15	4	2	9
Chipinga Public School	5	2	14	11	19	13	32	18	10	4
Johannesrust Farm School	7	3	8	12	15	15	30	—	13	17
Meadows Farm School	1	2	6	—	7	2	9	2	7	—
Melsetter Public School	4	2	9	11	13	13	26	8	15	3
Ruwaka Farm School	2	1	4	2	6	3	9	6	—	3
Emerald Hill Orphanage School	5	1	3	13	8	14	22	—	22	—
AIDED FARM SCHOOLS.										
Amalinda	1	1	—	—	1	1	2	2	—	—
Ashallow	1	1	1	—	2	1	3	3	—	—
Dawn	1	—	1	1	2	1	3	3	—	—
Didcot	—	1	—	1	—	2	2	2	—	—
Dormervale	—	1	—	—	—	1	1	1	—	—
Eggesford	—	2	—	—	—	2	2	1	1	—
Fred Mine	2	4	1	2	3	6	9	9	—	—
Gladstone	2	—	—	—	2	—	2	2	—	—
Gowrie	1	1	—	2	1	3	4	4	—	—
Hilton	—	—	—	1	—	1	1	1	—	—
Idara	—	1	—	1	—	2	2	—	—	2
Kirndean	—	2	—	—	—	2	2	2	—	—
Lilfordia	2	1	3	—	5	1	6	1	5	—
Malala	2	1	4	2	6	3	9	7	—	2
Marshlands	—	1	—	—	—	1	1	1	—	—
Pagati	—	1	3	1	3	2	5	4	—	1
Riverside	1	3	5	1	6	4	10	—	—	10
Rudolphia	—	—	1	—	1	—	1	1	—	—
Sackville	2	1	—	1	2	2	4	3	1	—
Salem-Thurfield	—	—	3	—	3	—	3	3	—	—
Sandymount	2	3	—	3	2	6	8	—	—	8
Shanghaione	1	2	3	—	4	2	6	6	—	—
Weltevrede	1	1	4	—	5	1	6	6	—	—
Vungu North	3	2	1	1	4	3	7	2	5	—
Fair Adventure	—	1	—	1	—	2	2	2	—	—
COLOURED SCHOOLS.										
Avondale	31	36	21	22	52	58	110	—	110	—
Bulawayo	16	25	34	12	50	37	87	75	6	6
Gwelo	9	11	12	6	21	17	38	31	2	5
Salisbury	23	16	41	13	64	29	93	—	—	93
Umtali	2	1	22	14	24	15	39	—	—	39
Total	628	539	1,830	1,631	2,458	2,170	4,628	1,001	1,500	2,127

TABLE II.

Attendance of Parents at Medical Inspections.

	1929.	1928.	1927.
Children inspected	4,628	3,606	3,578
Parents present (1,001)	21.63%	21.57%	23.39%
Parents represented (1,500)	32.41%	25.48%	21.68%
Parents absent (2,127)	45.96%	52.93%	54.91%

A very satisfactory decrease is to be observed in the number of inspections that must perforce be completed in the absence of the parent or guardian, though this is due largely to the increase in the number of children inspected in the presence of a representative of the parent, such as the principal of a boarding school.

Routine medical inspection can never attain to its full value until the parent or a representative is present at the examination of each child; even though parents may feel that their children enjoy the best of health, and that therefore there is no need for them to be present at the inspection, they will still be welcome, since they alone can give information regarding past illnesses of which the children are frequently unaware.

Special Medical Examinations.—Special examinations were made of 247 children who were found in 1928 to be suffering with some defect for which treatment was advisable and who were not included among the routine inspections for 1929.

The causes for these examinations are detailed below. A parent was present at 54 of the inspections (21.86 per cent.) and represented at 63 (25.50 per cent.), but no parent was present at 130 of the inspections (52.64 per cent.).

TABLE III.

Defect.	Boys.	Girls.	Total.
Enlargement of tonsils	28	42	70
Adenoids	...	1	1
Skin disease	1	1	2
Malnutrition	1	1	2
Defective vision	25	18	43
Defective hearing	2	2	4
Deformities	7	5	12
Heart disease	5	2	7
Enlargement of the spleen ...	1	...	1
Mental condition	5	4	9
Bilharzia	1	...	1
Vaccination	32	35	67
Dental defects	15	13	28
Total	123	124	247

A Return of Defects found by Routine Medical Inspection.—This table gives the number of the various defects found among the 4,628 children inspected, both those serious enough to require medical or dental treatment and those that could remain under observation until the next inspection.

A more detailed comment upon most of these defects, and their incidence, will be found later in this report.

TABLE IV.

	Number referred for treatment.			Number requiring to be kept under observation, but not referred for treatment.			Total of defects.		
	Entrants.	Others.	Total.	Entrants	Others.	Total.	Entrants.	Others.	Total.
Malnutrition	...	...	...	16	111	127	16	111	127
Uncleanliness	5	7	12	...	...	...	5	7	12
Skin—									
Ringworm	...	6	6	...	...	...	...	6	6
Impetigo	8	4	12	...	...	...	8	4	12
Other diseases	2	25	27	1	51	52	3	76	79
Eye—									
Blepharitis	10	16	26	...	6	6	10	22	32
Conjunctivitis	4	3	7	32	144	176	36	147	183
Defeetive vision (exclusive of squint)	20	192	212	26	334	360	46	526	572
Squint	6	15	21	7	13	20	13	28	41
Other conditions	...	6	6	1	13	14	1	19	20
Ear—									
Defeetive hearing	3	2	5	37	71	108	40	73	113
Otitis media	3	14	17	...	...	...	3	14	17
Other ear diseases	...	...	...	...	3	3	...	3	3
Nose and throat—									
Slightly enlarged tonsils ...	12	30	42	218	584	802	230	614	844
Enlarged tonsils only	40	154	194	16	70	86	56	244	280
Adenoids only	8	10	18	1	4	5	9	14	23
Enlarged tonsils and adenoids only	11	29	40	2	18	20	13	47	60
Mouth breathers (adenoids not apparent)	34	30	64	9	5	14	43	35	78
Other defeets	...	2	2	2	2	4	2	4	6
Defective speech	...	4	4	6	14	20	6	18	24
Dental disease—									
1 to 3	218	533	751	...	...	...	218	533	751
4 and over	82	148	230	...	...	...	82	148	230
Heart and eirculation—									
Heart disease : Organic ...	...	11	11	3	18	21	3	29	32
Funetional ...	1	10	11	84	372	456	85	382	467
Anæmia	2	...	2	38	87	125	40	87	127
Lungs—									
Bronchitis	5	1	6	19	33	52	24	34	58
Other non-T.B. diseases ...	...	1	1	...	10	10	...	11	11
Tubereulosis—									
Glands	1	1	2	1	1	2	2	2	4
Hip	...	1	1	...	1	1	...	2	2
Other bones and joints	...	1	1	1	...	1	1	1	2
Nervous system—									
Epilepsy	...	...	...	...	2	2	...	2	2
Chorea	...	4	4	...	...	...	...	4	4
Other conditions	...	...	...	5	7	12	5	7	12
Deformities—									
Flatness of chest wall	65	504	569	12	67	79	77	571	648
Lordosis	1	4	5	...	...	...	1	4	5
Kyphosis	7	162	169	2	25	27	9	187	196
Scoliosis	2	123	125	1	8	9	3	131	134
Pigeon ehest	2	31	33	6	1	7	8	32	40
Other forms	3	12	15	4	75	79	7	87	94
Spleen—									
Mueh enlarged	4	16	20	11	69	80	15	85	100
Slightly enlarged	...	1	1	43	237	280	43	238	281
Other defects and diseases	3	16	19	20	107	127	23	123	146

The Number of Individual Children found at Routine Inspection to require Treatment (excluding Dental Defects).—Table IV. has shown the number of defects found to be present in all the children inspected, and the table below shows the percentage of children recommended for medical or surgical treatment.

Too much stress cannot be laid upon the seriousness of these findings. It is shown that 27.67 per cent. of all children inspected were found to require medical or surgical treatment, and a perusal of Table IV. will show that a very considerable proportion of these were suffering with defects of vision, of posture and of the tonsils. The causes of these defects will be commented upon later in this report, but attention should be drawn here to the comparable figures for school children in England and Wales (excluding London) during 1928.

TABLE V.

	Children inspeeted.	Found to require treatment.	Pereentage requiring treatment.	Pereentage in Great Britain found to require treatment.
Entrants ...	1,167	254	21.74	20.1
Others	3,461	1,027	29.65	21.6
Total ...	4,628	1,281	27.67	21.0

Action taken on previous Recommendations.—The number of children recommended for treatment in 1928 was as follows:—

Medical and surgical treatment	620
Dental treatment	1,028

Action was found to have been taken on these recommendations to the following extent:—

Vaccination	140
Dental treatment	298
Medical treatment	30
Surgical treatment	76
	544

Therefore 33.01 per cent. of the recommendations made in 1928 were acted upon. This figure compares unfavourably with that for the previous year, when it was 38.84 per cent., but so large a proportion of the recommendations in 1928 were for dental treatment that it seems probable the percentage of cases obtaining treatment will rise rapidly now that two Schools Dental Surgeons are employed.

Apart from the question of dental attention, there does remain an unfortunately low proportion of children obtaining treatment; this should improve in Salisbury now that the Health Visitor is assisting this Department with the following-up of cases recommended for treatment, but elsewhere any improvement must depend upon the increased appreciation by parents of the value of the inspection.

Malnutrition.—The percentage of children found to be below normal nutrition during 1929 compares favourably with the similar percentage for 1928, when it was 4.63 per cent., but this is probably due not so much to improvement in the general standard of nutrition among school children as to the increase in the number of boarders examined; for the latter group, as this table shows, are of definitely better nutrition than the day scholars, a difference largely attributable to the well-balanced diets and regular hours enjoyed by children at Government boarding houses.

TABLE VI.

	Total examined	Number below normal.	Percentage of those examined found to be sub-normal.
Boarders	1,560	17	1.07
Day scholars	3,068	110	3.58
Total ...	4,628	127	2.74

Cleanliness and Condition of the Skin.—Only 12 cases of uncleanliness of the skin were noted during the year, an unusually low number.

Among the 87 defects of the skin found were the following conditions:—

Acne	40
Impetigo	12
Veld sores	7
Ringworm	6
Seborrhœa	5
Psoriasis	4
Scabies	3

Defects of the Nose and Throat.—Enlargement of the tonsils is, as was pointed out in the report for 1928, much more common in this Colony than it is in England and Wales; whether the cause be the excess of dust particles in the Rhodesian atmosphere for the greater part of the year, or whether it be due to a chronic low grade infection passed from child to child, there is no question but that it is a frequent accessory to the habit of mouth breathing, with a resultant failure of the chest wall to develop to its full extent.

Too little attention would appear to be paid to the simple procedure of daily gargling with salt solution, for, in those boarding schools at which this practice is faithfully carried out, the incidence of tonsillar enlargement is markedly decreased. Once gargling has become a general daily practice, nasal breathing a regular habit among children of all ages, and adequate attention paid to the teeth, then this high occurrence of enlarged tonsils will become a bugbear of the past.

In this table the term "other defects" includes mouth breathers who had no apparent adenoid growth and the tonsils had been removed or were not enlarged, nasal catarrh, deflected nasal septum, hypertrophy of the inferior turbinate bone, etc.

TABLE VII.

	Children with defects			Percentage of those examined found to have defects			
	Boys	Girls	Total	Boys	Girls	Total	Total in 1928
Tonsils—							
Slight enlargement ..	475	369	844	19.32	17.01	18.23	26.04
Much enlargement ...	134	146	280	5.45	6.72	6.05	9.20
Total enlarged ...	609	515	1,124	24.77	23.73	24.28	35.24
Adenoids: Present alone	15	8	23	0.71	0.37	0.44	...
Tonsils and adenoids ...	43	17	60	1.75	0.78	1.29	...
Other defects	62	22	84	2.52	1.01	1.81	...

Diseases of the Eyes.—I. *External Eye Defects.*—The percentages given in the following table regarding the incidence of blepharitis and conjunctivitis are lower than those for 1928, but they remain too high. Dust irritating the eyelids and the mucous membrane of the eye is a common cause predisposing to these conditions, but it is found in most cases that the infection arises from dirty hands and dirty towels.

Of the 41 children listed below as suffering with squint, 21 have been recommended to undergo refraction, 13 are wearing suitable glasses, and for seven glasses are at present not required.

The "other defects" tabled below include corneal opacity (3), cataract (2), subconjunctival hæmorrhage (2), nystagmus (2), exophthalmos (2), ptosis (1), and interstitial keratitis (1).

TABLE VIII.

	Children with defects.			Percentage of those examined found to have defects.			
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Percentage in 1928.
Squint	26	15	41	1.05	0.69	0.88	1.08
Blepharitis	8	24	32	0.32	1.10	0.69	1.05
Conjunctivitis... ...	101	82	183	4.11	3.78	3.95	10.42
Other defects	9	11	20	0.36	0.50	0.43	0.13

II. *Defects of Vision.*—The school children of Southern Rhodesia suffer less with defects of vision than do those of England and Wales, but the incidence (shown below) is still sufficiently high to warrant a close study of children found to be defective, even in a slight degree, together with a systematic examination of their eyes, the provision of glasses where necessary, and a regular insistence upon certain rules for the prevention of damage to the eyesight.

(a) Treatment.—In the past, when a child was found to be suffering with defective vision of a nature that required attention, the parent was advised to visit a private practitioner for the purpose of a further examination of the eyes and, where necessary, the prescription of glasses. A certain proportion of the parents so advised have either lived a considerable distance away from any practitioner who could carry out such special examinations, with the result that treatment was never obtained, or they have not taken the advice of the Medical Inspector for other reasons. This has been unsatisfactory, since lack of adequate attention must lead to an increase in the severity of the defect, to a failure of the child to obtain the full benefit from the school curriculum, and to definite damage of the general physical condition.

In order that provision should be made for the refraction of children in country districts and of those who would not otherwise receive attention, a scheme has been approved whereby, on the payment of a fee to the Government, refractions will be undertaken during visits of the Medical Inspector of Schools to the various schools, and when glasses are found to be necessary they will be prescribed; the glasses will be obtained by the parent or guardian of the child examined.

The success of this scheme will be dependent upon the full appreciation by the parents of the urgent necessity for obtaining the glasses when they have been ordered, and by both parents and teachers of the necessity for ensuring that the glasses are worn regularly. The eyesight of the child is so obviously one of his greatest assets that every possible step must be taken to ensure that this new branch of the duties of the school medical service shall produce the most beneficial results for the school children of this Colony.

(b) Preventive Measures.—Every child, leaving home for the first time to enter school with its new interests of reading and writing, is exposed to some extent to the danger of eye strain. A few are pre-disposed, by reason of previous infectious disease or an hereditary tendency, to an early development of defective vision; but most have ample power, given the assistance from proper surroundings, *i.e.*, satisfactory lighting, type, and desks that support the body in a correct attitude, that is their right, adequately to accommodate their vision to the close work of the class-room without any undue strain.

Class-rooms and all places where children work must, therefore, be arranged so as to give the eyes every assistance. The windows should be large, filling nearly the whole of the (children's) left hand wall of the room right up to the ceiling. The eaves of the roof should project sufficiently to prevent the brilliant sunlight at any time from shining directly into the room, while ensuring that sufficient diffused light will enter. Blackboards should be placed on the children's right hand side, should have a dull, matt surface, and be easily seen from any part of the room; the letters marked on the board should not be smaller than 2 inches square. Desks should be made of such a structure that the child is well balanced when reading, writing, or listening, and that the book or paper can be adequately supported so that no print shall be held nearer to the eyes than 12 inches.

It is not, however, only at school that the eyesight of children is damaged, for lighting conditions are frequently bad in the home, especially in the temporary buildings found throughout this country, while adequate attention is certainly not paid to the "sore eyes" that are the result of dust, sun glare, and dirty skins.

One further factor in the production of defects of vision must be mentioned—the cinematograph. It is well known that those who sit in seats very near to the screen suffer with eye strain, especially when a flickering of the image is pronounced, a defect by no means unknown on the screens of Rhodesian picture houses. If eye strain is to be avoided, the angle of elevation of the screen should never exceed 35 degrees, and the lateral angle 25 degrees; where the front seats of halls are at fault in this way, children should be prohibited from occupying those in any position where these angles may be exceeded.

In the following table have been included all children suffering with the slight departure from normal vision denoted by an inability to read type smaller than 6/9 : 6/9 on Snellen's test chart; some of these were also suffering with headache, conjunctivitis or other signs of eye strain, and have been recommended for refraction, but the others will remain under observation for one year, when what may have been no more than a temporary defect may have disappeared.

Out of 3,987 children tested, 136 (3.41 per cent.) were found to be wearing glasses, and of these 17 were receiving doubtful benefit from the lenses and were recommended to undergo a re-testing of the eyes.

TABLE IX.

	Children with defects			Percentage of those examined found to have defects			
	Boys	Girls	Total	Boys	Girls	Total	Percentage in 1928
Defective—6/9 : 6/9 ...	115	88	203	5.45	4.68	5.09	..
Defective—above 6/9 ...	197	190	387	9.34	10.10	9.70	7.61
Total	312	278	590	14.79	14.78	14.79	...

Diseases of the Ears.—In most of the 113 cases of defective hearing tabled below, the defect was due to wax in one or both ears; this is so easily preventable that the increased incidence of defective hearing found in 1929 must be ascribed very largely to the inertia shown by parents and by children themselves.

But there still remain some parents who adhere to the pernicious habit of clearing out the ears with a hairpin, and until such primitive methods become obsolete the incidence of active middle ear disease and of deafness due to old disease can never decrease to any considerable extent.

Sufficient attention is not paid by many parents to the condition that they seem willing to look upon as a minor complaint and to label vaguely as "running ear." The condition is one of suppurative middle ear disease and, if carefully treated, is curable; if neglected, every fresh naso-pharyngeal infection may light up not merely middle ear disease, but mastoid infection, which may spread to the brain with dire results.

TABLE X.

	Children with defects.			Percentage of those examined found to have defects.			
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Percentage in 1928.
Defective hearing ...	57	56	113	2.31	2.58	2.44	1.11
Active middle ear disease	12	5	17	0.38	0.23	0.36	0.25

TABLE XI.

Defects of Speech.

Children with defects.			Percentage of those examined found to have defects.		
Boys.	Girls.	Total.	Boys.	Girls.	Total.
15	9	24	0.61	0.41	0.52

Heart Disease and Disorders of the Circulatory System.—From the table below it will be seen that functional disease of the heart remains one of the commoner forms of defect found among children in this country; in a few cases this may be due to over-exertion, malnutrition, smoking, etc., but in the great majority the condition is probably caused by an old malarial infection. Functional disease of the heart is of interest in so far as it may point to some flabbiness of the muscle and general weakness of tone, but it is rarely of sufficient clinical importance to warrant more than the keeping of the child under observation for a short period.

Organic disease of the heart is, however, a more serious condition, and it is fortunate that the incidence is low in this Colony, since the high altitude might cause a limitation of the activities of children suffering with certain organic heart lesions. Where this defect is discovered, steps are taken to advise both parents and teachers regarding the careful regulation of the child's activities, both at work and at play; with adequate rest and care there is no reason why most of these children should not lead normal, healthy lives after they leave school.

TABLE XII.

	Children with defects			Percentage of those examined found to have defects			
	Boys	Girls	Total	Boys	Girls	Total	Percentage in 1928
Organic disease ...	27	5	32	1.09	0.23	0.69	0.58
Functional disease ...	250	217	467	10.17	10.00	10.09	15.94
Anæmia	64	63	127	2 59	2.90	2.74	...

TABLE XIII.

Deformities and Postural Defects.

	Children with defects.			Percentage of those examined found to have defects.			
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	1928 Total.
Flat chest and poor expansion	458	190	648	18.63	8.75	14.00	15.30
Kyphosis	56	140	196	2.27	6.45	4.23	5.99
Scoliosis	18	116	134	0.73	5.34	2.89	4.15
Lordosis	4	1	5	0.16	0.04	0.11	0.05
Pigeon chest	22	18	40	0.89	0.83	0.86	1.61
Other deformities ...	55	39	94	2.23	1.79	2.03	1.02

This group of defects is the most important to which attention must be drawn in this report; it includes defects that are for the most part preventable, and the high incidence shown above must be viewed with the greatest alarm.

That the incidence among school children in Southern Rhodesia should be very considerably greater than that found among children even in the thickly-populated industrial areas of Great Britain suggests that there must be some particular local factor at work, and an enquiry has been held during the latter half of the year with a view to the elucidation of the cause or causes of this serious and distressing defect.

It would appear that there are several factors, all of which tend to some extent to assist in the development of postural defects in this country, and of these the following are the most important.

A. **Respiratory.**—(1) *Mouth Breathing.*—A defect caused in itself by enlargement of the tonsils, and nasal obstruction due to adenoids or catarrhal conditions; these are probably primarily due to the excess of dust present for the greater part of the year in the Rhodesian atmosphere.

(2) *Dust.*—By its direct effect in causing a relative reflex inhibition of respiration from a (frequently sub-conscious) fear of inhaling the dusty particles in the air.

(3) *Abdominal Constriction.*—Due to the Rhodesian custom of providing boys with belts which are only too frequently worn so tightly fastened that abdominal breathing is made as impossible as it was for women in the days of tight lacing, with a resultant decrease in the use of the ribs and chest muscles for thoracic respiration.

B. **Muscular Weakness.**—Marked by a general lack of tone of the muscular system, especially the muscles of the spine. This weakness is probably due to the following factors:—

(1) *Errors of Diet.*—A factor more particularly in evidence among day pupils, who are more prone to suffer from irregularities of feeding.

(2) *Chronic Infections,* among which malaria is the most important.

(3) *The Length of Morning School Hours,* which especially affects children up to the age of puberty and results in a state of lassitude to be observed during the last period of the five-hour session, when many of the children would appear unable to retain the correct posture in class, a condition that is naturally more marked in the hot weather.

(4) *Climatic Conditions,* of which the more the other factors are seen in their true light the less important part does climate *per se* seem to play.

C. **The Lack of an Adequate System of Physical Training and Education for Boys.**—A marked improvement has already been noticed in the postural efficiency of girls at those schools to which instructresses specially trained in modern methods of physical training have been appointed, but for boys no provision has yet been made for instruction other than that of "drill." Unfortunately it has been found necessary that such drill should be carried out in groups sometimes numbering as many as fifty, so the full benefit of this essential instruction could never be obtained by boys suffering with a defect of posture, who therefore required special attention. The absence of gymnasia, or at least a covered space in which physical instruction can be given, has also proved a considerable handicap.

D. **Other Causes.**—(1) *Sun Glare,* accentuated by a certain failure to provide children with hats that are sufficiently wide-brimmed, with the result that there is a definite tendency for such children, when out of doors during the daytime, to keep the gaze directed upon the ground, with a consequent drooping of the head and a bowing of the shoulders.

(2) *Badly constructed Desks.*

Each of these causes, with the exception of the comparatively unimportant one of climatic conditions, is preventable, and the degree of certainty with which it will be possible to look forward to a gradual decrease in the incidence of these defects will depend in part upon the education of each child to an appreciation of the importance of these various causes, in part to the institution of a more adequate scheme of physical instruction in the schools, especially among the boys, under the care of an Inspector who is trained in the methods of physical education, and, above all, in part to the care and interest of the parents, who can, and should, form the first line of attack in the prevention of the occurrence of any defects.

It will be observed that the most common postural defect found during the year was simple flatness of the chest wall, and fortunately this is the easiest to remedy if regular daily breathing exercises are carried out after defects such as adenoids, enlargement of the tonsils, etc., have been removed.

Kyphosis, scoliosis and lordosis, however, do respond satisfactorily to remedial exercises, and under the expert guidance of the instructresses at certain girls' schools a considerable improvement has been noted during the year.

The group of defects tabulated as "other deformities" include the following: ventral hernia (11), inguinal hernia (13), genu valgum (20), pes planus (9), hydrocele (2), etc.

Vaccination.—Out of the 4,628 children examined, 294 (6.35 per cent.) were found to be unvaccinated, and nearly all of these are to be included in the "Entrants" group. Vaccination of these children has already been carried out in many cases, as applications for exemption from vaccination are fortunately few in a community properly educated to an appreciation of the dangers of smallpox and the immunity conferred by vaccination.

Infectious and Tropical Diseases.—A history of such diseases was obtained from the following children:—

Disease.	No.
Measles	2,390
Whooping cough	2,067
Chicken-pox	1,783
Mumps	629
Scarlet fever	116
Pneumonia	116
Diphtheria	56
Influenza	24
Rheumatic fever	26
Rubella	16
Smallpox	8
Infantile paralysis	4
Cerebro-spinal fever	3
Malaria	2,186
Dysentery	72
Enteric fever	64
Bilharzia	59
Malta fever	9
Blackwater	42
Colitis	9
Dengue fever	3

Attention has again to be drawn to a certain number of mild epidemics of infectious disease occurring in the schools, and especially to the occurrence of chicken-pox in Salisbury, mumps at Plumtree and Daisyfield, whooping cough at Gwelo, Selukwe and Daisyfield, measles at Plumtree, and diphtheria at Daisyfield.

These outbreaks cause much loss of school time and they are particularly difficult to combat, since few children entering school in this comparatively sparsely populated country have acquired any immunity to the commoner infectious diseases by contact with the infection. Until the advance of science makes possible in other infectious diseases the production of an artificial immunity similar to that now attainable as a preventive measure against diphtheria and scarlet fever, the occurrence of mild outbreaks must to a certain extent be looked upon as a necessary evil, and the line of attack must continue in the direction of improved personal hygiene, early isolation of infected cases, and the control of contacts.

It should be borne in mind also that the individual child who suffers with an infectious disease while at a boarding school is frequently in a better position to receive the full benefit of nursing facilities and medical attention than he would be at home; for the sequelæ of even simple infectious diseases can be serious, and damage to the heart, the eyesight, the lungs, etc., may, and frequently does, follow any carelessness in the nursing of such infections as measles, scarlet fever and whooping cough.

Malaria.—47.23 per cent. of the children examined gave a history of previous infection with malaria. It seems probable that this figure is too high, since there is a general tendency among parents and children to label as malaria any vague illness accompanied by a rise of temperature, but as the percentage of parents attending at the time of the inspection increases in the future, it will be possible to obtain a more satisfactory knowledge of the actual occurrence of the infection. Proof that malarial infection is less common in any one year cannot be sufficient reason for the slightest relaxation in the precautions to be taken to prevent infection, especially in those widespread parts of the Colony where the anopheles mosquito is present. The following table shows the percentage of children found to be suffering with enlargement of the spleen.

TABLE XIV.

Enlargement of the Spleen.

	Children with defeets.			Percentage of children examined found to have defects.			
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Pereent-age in 1928.
Spleen tender ...	5	...	5	0.20	...	0.10	0.25
Spleen much enlarged	75	20	95	3.05	0 92	2.06	4.27
Spleen slightly enlarged	209	72	281	8.50	3.31	6.07	7.09
Total ...	289	92	381	11.75	4.23	8.23	11.61

Bilharzia.—The investigation started last year to discover the number of carriers of infection has been continued, and the bacteriological examinations undertaken by the Director of the Public Health Laboratory have given the following results:—

	Boys examined.	No. of positive cases.
Milton School, Bulawayo ...	228	16
Shamva Public School	34	1
Total	262	17

The percentage of children found to be infected is, therefore, 6.48, which is almost the same as last year's 6 per cent.

Mental Development.—A full and valuable report upon mental development among children was presented to the Government by Dr. Annie Clark, Assistant Medical Inspector of Schools, during the year, as the result of an investigation carried out by her in order to discover the number of school children in the Colony who are below normal standard of intelligence and who, therefore, need special methods of teaching. The findings are tabulated below, and the percentage (2.03 per cent.) of children in Southern Rhodesia found to require special teaching can be compared with the percentage (2 per cent.) given for school children in England and Wales in the report of the Board of Education and the Board of Control published in 1928.

	Children found to be defective during this investigation	
	Number of children	Percentage of school population
I. Q. Below 70	96	1.23
I. Q. 70-78	63	0.80
Total that would benefit by special teaching ...	159	2.03

Dental Diseases and Defects.—Of the 4,628 children examined at the routine medical inspection during the year, 751 (18.38 per cent.) were found to have one to three, and 230 (4.97 per cent.) to have four or more carious teeth, making a total of 981 (23.35 per cent.) children defective. These figures do not present a true picture of the occurrence of dental caries among school children, since no use is made of the dental mirror and the percentage found at medical inspection is consequently too low.

A more correct appreciation of the incidence of dental defects will be obtained from the data collected by the Schools Dental Surgeons, who found that out of 2,202 children inspected during the year, 1,941 (88.14 per cent.) required dental treatment. This figure is high on account of the wide field of inspection covered by the newly appointed Dental Surgeons, who, as will be seen from their report, visited nearly all the schools (except aided farm schools) in the Colony for the purpose of inspecting the teeth of the children and thus obtaining definite knowledge regarding the amount of work to be done in the future.

It is now possible, as a result of these tours of inspection, so to plan the future work that every child who is eligible for treatment, and whose parent or guardian signs the form of request for treatment, will be able to receive attention in the next two years; after that time it will be possible for the Dental Surgeons annually to pay especial attention to conservative treatment among children of the younger age groups, and thus bring to the growing child the invaluable advantage of an adolescence unharmed by dental disease.

The children at present eligible for treatment are: (1) those attending school in districts where there is no resident private practitioner, (2) those attending primary schools, orphanages and homes, or in receipt of free Government tuition, and (3) those whose parents are indigent and have obtained a certificate to that effect from the Magistrate or Civil Commissioner.

Inspection only is carried out for all other school children, and their parents are advised if treatment is considered to be necessary.

Dental Inspection and Treatment.—Mr. Cyril Fletcher, during the months January to May, completed inspection and treatment as follows:—

School.	Average attendance.	No. inspected.
Avondale Preparatory	140	70
Hatfield Preparatory	85	49
Parktown Preparatory	55	38
Hillside Preparatory	44	30

Total number of children inspected, 187.

Boys, 93; girls, 94.

Total number of children treated, 172.

Number with no caries	7
Number of teeth—	
Septic	237
Carious	620
Tartar—	
Slight	13
Severe	1
Nil	173
Gum condition—	
Good	178
Fair	7
Poor	2
Number of teeth extracted—	
Temporary—Local	342
General	16
Permanent—Local	64
Number of teeth extracted prior to inspection ...	153

Number of teeth filled—	
Temporary	94
Permanent	267
Number of teeth filled previously	81
General anæsthetic was administered by a general practitioner in one case.	
Extractions for regulation purposes	4
Number of children for scaling operations	18
Cases of gingivectomy	2
Green stain	3
Marginal gingivitis	Nil

For an account of the work completed from August to December I am indebted to Messrs. R. Woodcock and A. Silva Jones, Schools Dental Surgeons, whose report now follows:—

Work undertaken since July has consisted chiefly in inspection and emergency treatment of children at country and farm schools, with the exception of aided farm schools. So many schools had not been visited for a considerable period that it was felt more good would accrue from emergency treatment for the remainder of 1929. During the inspection, treatment was only given to those children whose parents or guardians had signed the consent form.

Figures showing the number of children inspected and treated:—

Number of children inspected—	
Boys	1,153
Girls	862
Total	2,015
Number of children treated	734

Caries was present in 5,981 teeth, varying in extent from fissure cavities to exposures.

Septic Teeth were present in 871 cases, due to encroachment of pulp by caries and consequent death and putrefaction of pulp and nerve canal contents.

Salivary Calculus was present in the teeth of 356 children; in some cases due to neglect and loss of function, but in the majority of cases situated on the lingual aspect of the lower incisors. In 16 cases the calculus was severe and combined with chronic marginal gingivitis.

Gingivitis.—Marginal gingivitis was severe in 36 cases and accompanied by infection of the peridontal membrane and involving the exudation of pus.

Hypoplasia was found to be present very markedly in seven cases, and several more children had pits and fissures of varying degree.

Green Stain, due to neglect and lack of cleanliness, was present in 21 cases. The teeth were polished and the children instructed in the use of a toothbrush.

Irregularities of the Teeth.—Several cases of superior protrusion were seen and one case of open bite. One peg-shaped, supernumerary upper central was extracted, and one enlarged *frænum labii* was cut back in order to reduce the diastema so caused. In other types of cases 12 teeth were extracted to relieve overcrowding.

Condition of Children at Time of Inspection prior to Treatment.—The inspection undertaken by Messrs. Woodcock and Jones has shown that 2,015 children were examined, and 6,852 teeth were found to be diseased, making an average of 3.36 diseased teeth per child.

Extractions—	
Permanent Teeth—	
Under local anæsthetic	235
Temporary Teeth—	
Under local anæsthetic	1,034
Under general anæsthetic	16
Teeth extracted for regulation purposes	12
Fillings—	
Permanent teeth	215
Temporary teeth	77

General anæsthetic was administered by a Government Medical Officer in two cases.

Teeth for Treatment.—Amongst those children inspected and awaiting treatment, including those who have received emergency treatment, it is found that 5,275 teeth yet remain to be attended to.

Cleanliness.—In one boarding school, where toothbrush drill is enforced regularly, a marked improvement was at once apparent on examination of the mouths of the children. It is hoped that we shall be able to make superintendents of hostels, etc., more keen and enthusiastic on this important portion of boarding school routine.

Diet.—Continued attention has been paid to the dietaries provided at the various school hostels, but the time is now ripe for a general enquiry into the suitability of the different foodstuffs for children in this country, with especial regard to the relationship of diet and climate. Meanwhile an instruction has been issued requiring that all children in Government hostels should have 1½ pints of milk each day, since of all foods milk is the one natural product that contains all the proximate principals of a well-balanced diet.

There is an unfortunate tendency, not confined entirely to the rural districts, for parents to give their children an excess of starchy foods, and especially of mealie meal. Green vegetables, milk, and fruit at certain seasons of the year, are readily obtainable in this country, and poverty is not a sufficient reason to excuse ill-balanced dieting.

School Buildings and Furniture.—While it is a pleasure to report that the new school buildings and hostels for the most part exhibit a commendable approach to modern hygienic standards, it must also be noted that fault is to be found with a considerable proportion of the farm schools scattered throughout the Colony.

Only too frequently in the rural districts do children spend nearly five hours of each school day in an old building used at other times for farmers' meetings and various local activities; difficult to keep clean on account of the roughness of the walls and flooring, draughty from the poor condition of walls and windows, insufficiently lighted, and with inadequate washing and sanitary accommodation—such is a true picture of several of the farm schools visited by me during 1929.

Until such buildings can be replaced by modern school houses it is impossible to look for any marked improvement in the health of our rural school children, and in the planning of such new buildings it is essential that certain standards should be adhered to.

Deaths of Children of School Age.—The following table gives the causes of deaths occurring among school children during the year. The death rate among such children was 3.5 per 1,000, a figure slightly higher than that found in England and Wales, but this is due to the number of deaths caused by infections not common in more temperate zones.

TABLE XV.

Cause of Death.	Boys.	Girls.
Enteric fever	1	1
Blackwater fever	3	...
Malaria	1	1
Cerebro-spinal meningitis	3	2
Meningitis	1	...
Tubercular meningitis	...	1
Pulmonary tuberculosis	...	1
Pneumonia	2	1
Septicæmia	2	...
Pyæmia	...	1
Chorea	...	1
Rheumatic endocarditis	...	1
Valvular heart disease	1	...
Acute tonsilitis	...	1
Dropsy	...	1
Lymphadenoma	1	...
Sarcoma of glands and spine	1	...
Totals	16	12

C. C. P. ANNING,
Medical Inspector of Schools.

10th February, 1930.

Report of the Director, Public Health Laboratory, for the Year 1929.

The Medical Director,
Salisbury.

As an early report has been called for, only a brief resume is possible.

Analysis of Work Done.—(a) *Pasteur Institute.*—There has been no undoubted rabies in Southern Rhodesia since 1913. Rabies virus, however, is kept going by rabbit inoculations every month and courses of treatment are prepared and stocked in sufficient quantity to meet any requirements of surrounding territories. Three courses of treatment were supplied to Northern Rhodesia and two to Nyasaland.

(b) *Routine.*—The bilharzia survey of school children was continued by the routine staff, and Dr. Morris, who was assisting during the absence of the Director, made some interesting investigations into the prevalence of ankylostomiasis among natives.

The number of examinations made during the year was 6,062, which is less than in 1928, when 6,747 examinations were made. This decrease is due partly to the absence of two of the staff on leave and partly to an unavoidable delay in obtaining bilharzia specimens from outside districts.

The specimens sent came from the following localities:—

Southern Rhodesia—	
(1) Salisbury and district	5,127
(2) Outside districts	990
Other Colonies	4

The number of examinations for outside districts (990) shows a satisfactory increase over the preceding year (366).

The following table shows the methods employed in examination of specimens:—

Bacteriological and Protozoological.—	
Microscopical examinations	1,457
Cultural examinations for organisms	953
Bacteriological analysis of water, milk, sewage, antiseptics, etc.	53
Biologic tests for virulence, etc.	3
Serological tests for various diseases	985
Vaccines	82
Pathological.—	
Microscopical examinations, etc.	1,034
Sectional examination of tumours, etc.	121
Post mortem dissections	101
Preservation of museum specimens	15
Helminthological (Worm Diseases).—	
Microscopical examinations for worms or ova	628
Medico-Legal.—	
Microscopical or chemical tests	25
Entomological.—	
Identification of insects, etc.	1
Chemical.—	
Tests for various substances	332
Estimation of various substances	13
General.—	
Collection of specimens	259
Total	6,062

(c) *Government Analyst.*—Chemical Laboratory.—The Government Analyst reports that during the year 263 samples, grouped as follows, were examined:—

Biochemical.—	
Blood for non-protein nitrogen	6
Blood for sugar	7
Blood for urea	4
Cerebro-spinal fluid for colloidal gold curves	3
Gastric juice	1
Test meals	20
Urine for urea	9
Urinary calculus	1
Human milk	1
Total biochemical	52
Forensic.—	
Toxicological	103
Stains for blood	20
Stains for semen	12
Milk	38
Water	19
Drugs	7
Miscellaneous	12

Composite samples are entered as one sample. Thus a test meal, entered as one sample, may comprise 17 specimens and involve 85 separate tests.

Lectures were given during the year to members of the B.S.A. Police force on the general properties of poison, the peculiar features associated with native poisons, and the proper methods to adopt in securing and submitting samples for analysis. Some work has been done in that extremely difficult field for research, namely, alleged native poisons, and increased use has been made of animals, to decide whether the plants or preparations in question were poisonous or not. In this connection the Government Analyst remarks that it is significant that native criminals show an increasing tendency to employ the more European poisons, e.g., arsenic, cyanide and strychnine.

Milk Analysis.—The 38 examinations resulted in four prosecutions with three convictions.

Remarks on Disease, etc., dealt with.—*Blackwater Fever.*—The Rhodesian Research Fellow is reporting the results of his work during his stay in this Colony.

Malaria.—On the routine side 648 examinations gave 123 positive results, as compared with 59 positives the previous year. Malignant tertian is still the predominant variety of the disease.

Undulant (Malta) Fever.—142 examinations gave only two positive results, as compared with 19 cases in 1928.

Enteric Fevers.—180 examinations showed 26 typhoid and 3 paratyphoid B infections. These results are slightly higher than in 1928. There were 4 cases of infection with *B. fæcalis alkaligenes*, which sometimes causes a typhoid-like fever.

Dysentery (Bacillary and Amœbic).—Out of 212 examinations amœbæ were actually found or the cell-picture indicated amœbic infection in 15 cases. The remainder were mostly bacillary infections, the organisms belonging to the shiga or flexner type whenever identified. A few cases showed proteus infections. A few cases of giardia (lamblia) infection occurred; this protozoon sometimes causes dysenteric-like symptoms.

Pneumonia, Influenza, etc.—Few specimens are sent, as these diseases are usually diagnosed by physical signs and symptoms. There were five cases of pneumococcal meningitis, and *post-mortems* showed 20 cases of lobar pneumonia, four cases of broncho-pneumonia and one case of septic pneumonia. There was one case of monilia infection.

Cerebro-Spinal Fever.—108 tests gave 21 positive results, some of these being repeat tests on the same case. An outbreak was investigated and found to be due to a carrier who was freed from infection by a bacterial filtrate made in this laboratory.

Tuberculosis.—205 tests, chiefly of sputum, gave 27 positives. The disease was also found 17 times at *post-mortems*.

Leprosy.—16 tests with 1 positive.

Diphtheria.—218 tests showed 42 cases of this disease. There were 36 in 1928. Vincent's organisms, which cause a diphtheria-like disease sometimes and also intractable ulcers, etc., were found 8 times.

Venereal Diseases.—(a) Syphilis.—609 tests gave 155 positive and 24 doubtful re-actions. There were 143 positives in 1928. The Wassermann test was used throughout, except for a short period, when a scarcity of guinea pigs made the sigma test necessary.

(b) Gonorrhœa.—236 tests with 119 positives, one of them being an infection of the eye. There were 71 positives in 1928. The number of actual cases is fewer than the figures given, as many of them are re-examined till cured.

(c) Soft Sore.—Ducrey's bacillus was found in 3 cases.

Schistosomiasis (Bilharzia).—153 routine tests showed *S. hæmotobium* (the urinary parasite) present in 66 cases, and *S. mansoni* (the intestinal form) in 3 cases. *Post-mortems* showed one case of vaginal tumour, one appendicitis, one liver cirrhosis and one bladder disease due to these worms. Eight specimens (all positive) were sent from the Nyadiri Native Girls' School to prove the existence of infection there. In the bilharzia survey, 228 boys of Milton High School showed 16 cases, and 34 boys of the Shamva Public School showed one case. The percentage for the two schools combined works out at about 6.5 per cent., which is very similar to that obtained last year (6.98) among the Salisbury schoolboys.

Ankylostomiasis and other Worm Diseases.—214 tests for ankylostomiasis (hookworm) gave 97 positives. Nearly all these tests were carried out by Dr. Morris, who made a special investigation and found a very large number of northern natives infected. Eighty-one blood counts were made at Shabani by our staff to determine the presence of anæmia and eosinophilia among the infected natives. Other worm diseases were found occasionally (*Trichuris*, *Oxyuris* and *Hymenolepis nana*), but all these worm diseases need investigation as regards their prevalence, etc.

Trypanosomiasis.—10 negative examinations.

Other Diseases.—A few cases of ringworm were found. A few tests for typhus fever were made, all negative. No cases of tick fever.

Pathology.—1,034 microscopical examinations, 121 sections of tumours, etc., 101 *post-mortems* and 15 museum preparations were made. The microscopical examinations were mainly the cytology of urine, blood, stools, cerebro-spinal fluid and other body fluids. The sections and *post-mortems* showed the following conditions:—

Miscellaneous inflammations	35
Septicæmia and septic conditions	7
Lobar pneumonia	20
Broncho-pneumonia	4
Pleurisy or empyema	4
Pneumococcal meningitis	1
Tuberculosis	17
Enteric fever	2
Bilharzia	4
Appendicitis	2
Nephritis	2
Malaria	4
Pellagra	1
Pulmonary embolism	1

Gangrene	1
Asphyxia	1
Lateral sinus thrombosis	1
Goitre	2
Acute yellow atrophy	4
Status lymphaticus	1
Hypertrophy	1
Heart disease	4
Pregnancy and still birth	4
Puerperal septicæmia	4
Hydatid mole	1
Scurvy	1
Carcinoma	17
Precancerous conditions	1
Chondrosarcoma	1
Chondroma	3
Hypernephroma	1
Mixed parotid tumour	1
Hæmangioma	1
Melanoma	1
Papilloma	8
Cysts	7
Fibroma	2
Snake bite	1
Poisoning	5
Drowning	1
Miscellaneous injuries	13

Chemical Examinations.—These comprised various tests and quantitative estimations carried out on urine, blood and other body fluids, and totalled 345.

Water, Milk, Food, etc.—The Salisbury Municipal water supply was examined thirteen times, the Salisbury baths twice, Government House supply four times, Salisbury private supplies five times, Bulawayo water four times, Enkeldoorn twice, Fort Victoria twice, and Gatooma, Msasa and Chisipite once each. Two samples of ice-cream were examined, and one sample of milk. The antiseptic co-efficient of certain disinfectants was determined for Tender Board purposes.

Medico-Legal.—Eight suspected blood stains, seventeen suspected seminal stains, and some cases of suspected venereal disease were examined. Subsequent examinations were taken over by the Government Analyst during my absence.

Financial.—The new tariff was in force during the year, and the questions of responsibility for laboratory fees and of an annual contribution by the Municipality were advanced a step further.

L. J. JOHN ORPEN,
Director.

PART III.

ESTABLISHMENT.

The establishment as authorised during the year 1929 was as follows:—

Medical Director.
Senior Government Medical Officers (whole time), 2.
Bacteriologist.
Government Analyst.
Medical Inspector of Schools.
Assistant Medical Inspector of Schools.
Schools Dental Surgeons, 2.
Medical Superintendent, Leper Asylum (whole time).
Government Medical Officers (Grade I.), 3; (Grade II.), 7; (Grade III.), 11.
Aided Medical Officers, 6.
Compound Inspectors, 2.
Chief Clerk.
Senior Technical Clerk.
Clerk (Grade II.), 1.
Clerks on Probation, 3.
Women Clerks (Upper Grade), 1; (Middle Grade), 5; (Lower Grade), 3; (Temporary), 4.
Laboratory Assistants, 3.
Hospital Secretaries and Dispensers (whole time), 7.
Radiographers, 2.
Masseuse, 1.
Matron-in-Chief.
Hospital Matrons, 9.
Assistant Matrons, 2.
Nurse Matrons and Sisters, 20.
Qualified Nurses, 51.
Probationers, 76.
European Male Orderlies, 4.
Asylum Keepers and Overseers, 9.

Supplementary Auxiliary Staff.—

Part-time Hospital Secretaries, 6.
Needlewomen, 2.
Laundress, 1.
European Female Cook, 1.
Indian Cooks, 2.

The miscellaneous native staff attached to the various institutions totalled 239.

Total European staff	255
Total Asiatic and native staff	241
	496

Table I.

European Births, 1929.

District.	Jan.	Feb.	Mar.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Salisbury	25	28	26	32	32	35	28	30	34	35	26	19	350
Bulawayo	33	17	27	29	25	28	31	29	38	29	30	14	330
Umtali	7	7	10	10	5	8	15	8	5	10	2	17	104
Gwelo	7	5	6	7	3	3	6	7	3	14	8	5	74
Victoria	1	1	...	3	1	1	3	4	3	6	...	3	26
Gatooma	1	4	1	3	5	5	2	5	3	1	4	2	36
Gwanda	...	...	1	3	3	8	3	3	2	4	2	2	31
Selukwe	3	4	2	2	3	...	7	...	2	2	2	2	29
Charter	1	3	2	2	2	7	1	8	5	2	1	3	37
Melsetter	2	...	3	1	7	1	1	...	1	3	3	4	26
Umvuma	1	1	1	2	1	...	...	3	...	2	...	...	11
Hartley	...	2	3	2	1	2	1	2	...	...	1	...	14
Que Que	3	3	1	...	2	2	2	3	1	4	1	3	25
Totals	84	75	83	96	90	100	100	102	97	112	80	74	1,093

Table II.

European Deaths, 1929.

Age periods.	Males.	Females.	Totals.
0-1	43	30	73
1-5	17	16	33
5-15	15	13	28
15-25	27	4	31
25-35	29	16	45
35-45	24	19	43
45-55	47	27	74
55-65	46	18	64
65-75	36	14	50
75-85 and over	13	12	25
Age unknown	3	...	3
All ages	300	169	469

Table III.

European Deaths, 1929.

District.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Salisbury	10	7	9	14	12	16	10	16	16	16	10	11	147
Bulawayo	12	9	15	17	14	7	15	16	9	10	13	10	147
Umtali	5	6	2	10	4	4	5	5	2	3	1	6	53
Gwelo	1	2	4	1	2	3	7	1	7	5	5	3	41
Gatooma	2	5	1	1	1	...	...	2	...	3	2	1	18
Victoria	...	2	3	1	4	1	...	1	...	2	2	2	18
Gwanda	1	...	2	7	...	3	...	1	1	...	2	...	17
Melsetter	...	...	...	...	1	1	...	1	1	1	...	...	5
Umvuma	...	...	...	1	...	1	...	...	1	1	1	...	5
Charter	...	...	1	...	...	...	2	1	...	...	...	...	4
Selukwe	...	...	1	3	1	...	...	...	...	...	...	1	6
Hartley	...	...	...	...	...	1	...	...	...	...	1	...	2
Que Que	1	...	...	...	2	...	...	...	...	2	1	...	6
Totals	32	31	38	55	41	37	39	44	37	43	38	34	469

Table IV.

European Births and Deaths, 1929.

Month.	Births.	Deaths.	Ages of dying.										
			0-1.	1-5.	5-15.	15-25.	25-35.	35-45.	45-55	55-65	65-75.	75-85 and over.	Age unknown
January	84	32	7	1	4	4	...	2	3	6	2	2	1
February	75	31	3	3	...	3	5	5	1	4	5	1	1
March	83	38	8	4	1	3	5	4	4	5	1	3	...
April	96	55	12	6	5	2	6	4	8	7	1	4	...
May	90	41	8	2	...	3	4	3	5	9	7	...	...
June	100	37	4	1	5	4	3	6	5	4	3	2	...
July	100	39	6	5	...	1	3	2	8	5	7	2	...
August	102	44	5	1	6	1	7	1	11	5	7	...	...
September	97	37	7	2	3	3	3	2	7	3	4	3	...
October	112	43	7	2	...	3	4	7	8	5	4	3	...
November	80	38	2	2	2	3	3	3	10	7	5	1	...
December	74	34	4	4	2	1	2	4	4	4	4	4	1
Totals	1,093	469	73	33	28	31	45	43	74	64	50	25	3

Table V.

Table showing European Admissions to Hospitals during 1929.

Hospital.	Jan	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Salisbury	157	147	146	175	160	149	155	145	160	174	172	155	1,895
Bulawayo	123	112	114	125	120	103	128	133	131	135	126	101	1,451
Umtali	50	31	39	51	43	34	24	34	32	42	35	31	446
Gwelo	35	19	42	35	31	26	29	38	40	45	33	28	401
Ft. Victoria ...	19	16	19	19	23	21	16	13	7	13	14	13	193
Gwanda	2	8	8	7	8	6	4	4	12	5	5	1	70
Enkeldoorn ...	7	4	3	4	2	6	4	6	5	...	13	8	62
Gatooma	26	24	28	23	23	18	28	20	14	28	24	27	283
Shamva	2	5	17	16	12	4	2	5	3	4	3	7	80
Sinoia	5	5	10	17	24	13	15	18	15	15	12	7	156
Belingwe	...	...	2	...	...	...	1	...	...	...	...	1	4
Ndanga	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	426	371	428	472	446	380	406	416	419	461	437	379	5,041

Table VI.

Table showing Native Admissions to Hospitals during 1929.

Hospital.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Salisbury	135	108	115	129	119	112	130	148	144	154	124	142	1,560
Bulawayo	135	124	173	169	136	133	127	150	174	179	183	186	1,869
Umtali	34	31	23	33	27	28	27	30	33	45	34	38	383
Gwelo	48	30	59	63	53	40	62	56	67	83	51	46	658
Ft. Victoria ...	7	10	14	21	17	13	14	19	12	13	14	16	170
Gwanda	23	15	16	19	29	22	21	29	32	33	22	26	287
Enkeldoorn ...	13	10	4	13	20	8	10	11	7	22	11	7	136
Gatooma	76	46	61	88	53	53	52	56	83	99	51	105	823
Shamva	20	31	32	25	40	38	31	38	31	35	45	22	388
Sinoia	15	22	23	29	24	15	30	32	29	43	36	39	337
Belingwe	3	4	5	5	3	5	1	6	6	5	5	4	52
Ndanga	48	38	40	32	44	38	53	21	41	53	45	30	483
Totals	557	469	565	626	565	505	558	596	659	764	621	661	7,146

Table VII.

Table showing Monthly Admissions to Hospitals during 1929 from malaria, blackwater fever, dysentery, pneumonia, typhoid fever and scurvy.

EUROPEANS.

Disease.	Jan.	Feb.	March	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Malaria	56	52	114	122	108	46	29	22	18	45	25	31	668
Blackwater fever	—	1	2	3	8	4	...	1	...	1	2	...	22
Dysentery	4	7	9	3	1	4	7	3	4	11	10	8	71
Pneumonia ...	10	2	4	8	7	8	8	8	16	2	2	3	78
Typhoid fever..	3	5	5	9	4	1	...	2	11	4	7	6	57
Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...

NATIVES.

Disease.	Jan.	Feb.	March	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec	Totals.
Malaria	47	39	57	63	46	23	18	30	18	42	25	31	439
Blackwater fever	...	...	...	...	...	1	(coloured)		...	...	...	...	1
Dysentery	13	2	10	10	6	3	5	1	3	6	5	6	70
Pneumonia ...	67	36	38	40	36	48	44	82	94	104	70	74	732
Typhoid fever..	2	2	2	1	3	3	2	...	1	1	2	2	21
Scurvy	21	9	9	7	6	2	3	3	2	4	10	10	86

Table VIII.

Cases, with mortality rate per cent., admitted to hospitals during 1929, as compared with 1928.

Name of hospital.		1928.			1929.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury	White	1,834	77	4.18	1,895	63	3.32
	Native	1,618	260	16.05	1,560	184	11.79
Bulawayo	White	1,471	61	4.14	1,451	62	4.27
	Native	1,730	177	10.23	1,869	207	11.08
Umtali	White	457	15	3.28	446	23	5.16
	Native	354	41	11.60	383	43	11.23
Gwelo	White	440	26	5.91	401	21	5.24
	Native	610	64	10.51	658	53	8.05
Fort Victoria	White	173	12	6.94	193	6	3.11
	Native	164	15	9.15	170	23	13.53
Gwanda	White	45	...	...	70	3	4.29
	Native	243	19	7.82	287	20	6.97
Enkeldoorn	White	82	3	3.66	62	4	6.45
	Native	102	6	5.80	136	5	3.68
Gatooma	White	307	15	4.90	283	11	3.89
	Native	766	101	13.20	823	96	11.66
Shamva	White	93	4	4.30	80	4	5.00
	Native	265	34	12.85	388	30	7.73
Sinoia	White	82	4	4.88	156	3	1.92
	Native	217	38	17.50	337	25	7.42
Belingwe	White	11	2	18.20	4	...	...
	Native	68	5	7.35	52	2	3.85
Ndanga	White	...	...	...	...	...	...
	Native	...	...	...	483	14	2.90
Totals	White	4,995	219	4.40	5,041	200	3.97
	Native	6,137	760	12.39	7,146	702	9.82

Table IX.

Cases, with mortality rate per cent., of malarial fever admitted to hospitals in 1929, as compared with 1928.

Hospital.		1928.			1929.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury	White	158	1	0.63	164	3	1.83
	Native	88	1	1.1	101	3	2.97
Bulawayo	White	141	2	1.4	117	3	2.56
	Native	106	...	...	84	2	2.38
Umtali	White	173	2	1.15	147	1	0.68
	Native	64	5	7.82	52	7	13.46
Gwelo	White	60	1	1.66	46	2	4.35
	Native	24	1	4.1	52	1	1.92
Fort Victoria	White	36	1	2.8	52	2	3.85
	Native	2	...	...	14	...	...
Gwanda	White	9	...	...	14	...	...
	Native	8	...	...	10	2	20.00
Enkeldoorn	White	9	1	11.1	6	1	16.67
	Native	8	...	...	16	...	...
Gatooma	White	67	2	2.98	41	2	4.88
	Native	9	1	11.1	22	3	13.64
Shamva	White	40	...	...	37	1	2.70
	Native	39	4	10.26	37	2	5.41
Sinoia	White	31	...	...	42	1	2.38
	Native	17	...	...	6	...	...
Belingwe	White	2	...	...	2	...	...
	Native	5	...	...	15	...	...
Ndanga	White	...	...	...	...	...	...
	Native	...	...	...	30	1	3.33
Totals	White	726	10	1.38	668	16	2.40
	Native	370	12	3.22	439	21	4.78

Table X.

Cases, with mortality rate per cent., of hæmoglobinuric fever (blackwater) admitted to hospitals in 1929, as compared with 1928.

Hospital.		1928.			1929.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury	White	3	...	...	5	1	20.00
	Native	2	...	...	...	...	...
Bulawayo	White	4	...	...	3	...	...
	Native	1	1	100.0	...	...	...
Umtali	White	9	2	22.2	6	3	50.00
	Native	1	...	...	1 (col.)	...	...
Gwelo	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Fort Victoria	White	...	...	...	5	...	...
	Native	...	...	...	...	...	...
Gwanda	White	1	...	...	...	...	...
	Native	...	...	...	...	...	...
Enkeldoorn	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Gatooma	White	1	...	...	...	...	...
	Native	...	...	...	...	...	...
Shamva	White	2	1	50.0	2	...	...
	Native	...	...	...	...	...	...
Sinoia	White	...	...	...	1	...	...
	Native	...	...	...	...	...	...
Belingwe	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Ndanga	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Totals	White	20	3	15.0	22	4	18.18
	Native	4	1	25.0	(1 col.)	...	...

Table XI.

Cases, with mortality rate per cent., of pneumonia admitted to hospitals during 1929, as compared with 1928.

Hospital.		1928.			1929.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury	White	50	8	20.00	41	6	14.63
	Native	525	137	26.20	217	72	33.18
Bulawayo	White	28	6	24.00	13	4	30.77
	Native	228	59	26.00	270	85	31.48
Umtali	White	1	1	100.00	4	1	25.00
	Native	50	24	48.00	31	13	41.94
Gwelo	White	11	1	9.09	7	1	14.29
	Native	76	28	36.30	90	17	18.89
Fort Victoria	White	6	3	50.00	1	...	...
	Native	8	3	37.50	11	6	63.64
Gwanda	White	...	...	...	1	...	...
	Native	9	6	66.66	7	1	14.29
Enkeldoorn	White	1	...	...	2	1	50.00
	Native	7	2	28.50	3	...	...
Gatooma	White	10	3	30.00	10	...	...
	Native	47	19	40.42	51	19	37.25
Shamva	White	2	...	...	...	...	...
	Native	17	3	17.65	18	5	27.78
Sinoia	White	...	...	...	...	...	...
	Native	34	13	38.20	23	9	39.13
Belingwe	White	...	...	...	...	...	...
	Native	2	1	50.00	2	1	50.00
Ndanga	White	...	...	...	...	...	...
	Native	...	...	...	9	2	22.22
Totals	White	109	22	20.10	79	13	16.67
	Native	1,003	295	29.40	732	230	31.42

Table XII.

Cases, with mortality rate per cent., of dysentery admitted to hospitals in 1929, as compared with 1928.

Hospital.		1928.			1929.		
		Cases.	Deaths.	Mortality rate per cent.	Cases	Deaths.	Mortality rate per cent.
Salisbury	White	32	2	6.25	34	...	...
	Native	34	11	32.39	15	3	20.00
Bulawayo	White	25	1	4.00	15	...	...
	Native	20	5	25.00	25	3	12.00
Umtali	White	17	...	...	9	1	11.11
	Native	6	...	...	4	1	25.00
Gwelo	White	9	1	11.10	3	...	...
	Native	9	2	22.20	7	2	28.57
Fort Victoria	White	9	...	...	...	...	...
	Native	...	...	...	4	1	25.00
Gwanda	White	1	...	...	6	...	...
	Native	1	...	...	3	...	...
Enkeldoorn	White	2	...	...	...	...	...
	Native	2	...	...	4	...	...
Gatooma	White	2	...	...	2	...	...
	Native	3	1	33.33	1	1	100.00
Shamva	White	1	...	...	...	...	...
	Native	...	...	...	...	...	...
Sinoia	White	5	1	20.00	2	...	...
	Native	6	2	33.33	3	...	...
Belingwe	White	1	...	...	...	...	...
	Native	3	2	66.66	1	...	...
Ndanga	White	...	...	...	...	...	...
	Native	...	...	...	3	...	...
Totals	White	104	5	4.80	71	1	1.41
	Native	84	23	27.40	70	11	15.71

Table XIII.

Cases, with mortality rate per cent., of typhoid fever admitted to hospitals in 1929, as compared with 1928.

Hospital.		1928.			1929.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury	White	25	4	16.00	7	2	28.57
	Native	3	2	66.66	7	3	42.86
Bulawayo	White	12	1	8.50	14	5	25.71
	Native	7	2	28.60	10	2	20.00
Umtali	White	2	...	...	3	1	33.33
	Native	2	...	...	2	...	...
Gwelo	White	7	2	28.50	23	2	8.70
	Native	1	...	...	1	...	...
Fort Victoria	White	5	1	20.00	2	...	...
	Native	...	..	...	...	...	...
Gwanda	White	1	...	...	...	...	...
	Native	2	2	100.00	...	...	...
Enkeldoorn	White	...	...	...	3	1	33.33
	Native	...	...	...	...	...	...
Gatooma	White	2	...	...	...	...	...
	Native	1	1	100.00	1	...	...
Shamva	White	2	...	...	2	...	...
	Native	...	...	...	...	...	...
Sinoia	White	...	...	...	3	1	33.33
	Native	...	...	...	...	...	...
Belingwe	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Ndanga	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Totals	White	56	8	14.30	57	12	21.05
	Native	16	7	43.70	21	5	23.81

Table XIV.

Cases, with mortality rate per cent., of scurvy admitted to hospitals in 1929, as compared with 1928.

Hospital.		1928			1929.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury	White	...	...	...	...	...	...
	Native	3	1	33.33	5	...	...
Bulawayo	White	1	...	...	...	...	...
	Native	40	1	2.50	46	4	8.70
Umtali	White	...	...	...	...	...	...
	Native	2	1	50.00	...	...	...
Gwelo	White	...	...	...	...	...	...
	Native	21	3	14.20	9	3	33.33
Fort Victoria	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Gwanda	White	...	...	...	...	...	...
	Native	19	1	5.20	11	2	18.18
Enkeldoorn	White	...	...	...	...	...	...
	Native	...	...	...	3	...	...
Gatooma	White	...	...	...	...	...	...
	Native	12	...	...	9	5	55.56
Shamva	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Sinoia	White	...	...	...	..	...	...
	Native	8	...	...	3	...	...
Belingwe	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Ndanga	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Totals	White	1	...	...	...	...	...
	Native	105	7	6.65	86	14	16.28

Name of disease	EUROPEANS																						NATIVES						Grand totals	
	0-1		1-5		5 15		15-25		25-35		35-45		45-55		55-65		65-75		75-85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
I. GENERAL DISEASES.																																
1. Enteric fever	...	...	...	...	1	1	3	...	4	1	1	...	...	1	...	1	...	...	...	...	...	...	9	4	...	...	6	...	6	...	15	4
5. Malaria	6	3	4	2	1	1	1	...	1	2	1	1	...	3	1	...	3	...	...	...	...	...	18	12	3	3	17	3	20	6	38	18
7. Measles	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
9. Whooping cough	3	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	...	...	...	..	...	...	3	3
10. Diphtheria	..	...	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	...	...	...	...	...	...	3	2
11. Influenza	2	...	...	2	...	...	...	...	...	...	1	2	2	1	1	...	1	1	2	...	...	...	9	6	1	...	5	...	6	...	15	6
16. Dysentery	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	3	...	1	1	11	...	12	1	15	1
21. Erysipelas	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
24. Meningococcal meningitis	...	...	...	1	4	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	4	4	...	...	13	2	13	2	17	6
25. Other epidemic and endemic diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
25.3. Blackwater fever	...	...	1	...	2	...	3	1	2	...	1	...	1	...	...	...	...	...	...	...	1	...	11	1	...	Col'd.	1	...	1	...	12	1
29. Tetanus	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	..	...	...	...	...	1	...	...	...	2	...	2	...	3	...
31. Tuberculosis of the respiratory system	...	...	...	...	...	1	1	...	...	...	1	1	3	1	3	...	1	...	...	...	...	...	9	3	...	...	65	1	65	1	74	4
32. Tuberculosis of the central nervous system	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	1	...	2	...	3	1
33. Tuberculosis of the intestines and peritoneum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	4	...	4	...
34. Tuberculosis of the vertebral column	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	4	...	4	...
36. Tuberculosis of other organs	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
37. Disseminated tuberculosis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	7	...	7	...	8	...
38. Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	..	...	1	...	...	...	...	...	1	...	2	...	...	1	5	1	5	2	7	2
40. Gonococcal infection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
41. Purulent infection, septicæmia	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	..	...	4	1	2	...	12	...	14	...	18	1
II. GENERAL DISEASES NOT INCLUDED ABOVE.																																
43. Cancer of the buccal cavity	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	..	...	...	...	1	..
44. Cancer of the pharynx, œsophagus, stomach, liver and annexa	...	...	...	...	...	...	...	...	...	...	...	1	1	1	2	...	1	1	2	1	...	...	6	4	...	...	6	...	6	...	12	4
45. Cancer of the peritoneum, intestines and rectum	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	1	1	...	...	3	2	...	...	1	...	1	...	4	2
46. Cancer of the female genital organs	...	...	...	...	...	...	...	...	..	...	..	1	...	1	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
47. Cancer of the breast	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	3	...	...	...	...	1	...	1	...	4
48. Cancer of the skin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
49. Cancer of other or unspecified organs	...	...	...	...	1	...	...	...	...	1	...	...	...	2	1	1	3	1	...	...	...	...	5	5	...	...	1	...	1	...	6	5
50. Tumours not returned as malignant (brain and female genital organs excepted)	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
51. Rheumatic fever	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
Carried forward	14	7	8	8	11	6	10	1	8	5	6	8	11	11	11	3	10	4	5	2	2	...	96	55	8	5	164	8	172	13	268	68

Name of disease	EUROPEANS																								NATIVES						Grand totals	
	0-1		1-5		5-15		15-25		25-35		35-45		45-55		55-65		65-75		75-85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	14	7	8	8	11	6	10	1	8	5	6	8	11	11	11	3	10	4	5	2	2	...	96	55	8	5	164	8	172	13	268	68
52. Chronic rheumatism, osteo-arthritis, gout	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	..	...	...	...	...	1
53. Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	...	14	...	14	...
54. Pellagra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	2	...
57. Diabetes	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	..	...	...	...	...	...	1	1	...	...	...	...	...	...	1	1
58. Anæmia, chlorosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
64. Diseases of the spleen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	..	1	...	...	...	1	1	1	1	2	1
65. Leucæmia, lymphadenoma	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	1
66. Alcoholism (acute or chronic)	...	...	...	...	...	...	...	...	..	..	...	...	1	1	1	...	...	1	...	...	...	...	2	2	...	...	...	...	...	...	2	2
69. Other general diseases	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	2	...	3	...	4	1
III. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.																																
70. Encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
71. Meningitis	1	1	...	...	1	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	1	1	15	3	16	4	20	6
74. Cerebral hæmorrhage, apoplexy, etc.	...	...	...	...	...	...	...	...	...	...	1	...	2	1	...	1	3	1	1	...	...	...	7	3	...	...	2	...	2	...	9	3
75. Paralysis of unstated origin	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	2	...	3	...
77. Other forms of insanity	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	1	1	...	...	13	2	13	2	14	3
78. Epilepsy	1	...	...	...	...	..	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	2	1	...	...	6	...	6	...	8	1
79. Convulsions (non-puerperal, 5 years and over)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
80. Infantile convulsions (under 5 years of age)	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	2	...	3	1
81. Chorea	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
82. Hysteria and neuritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
84. Other diseases of the nervous system	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	...	...	1	...	1	...	2	1
86. Diseases of the ear and of the mastoid sinus	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	1	...	...	1	...	1	...	3	1
IV. DISEASES OF THE CIRCULATORY SYSTEM.																																
87. Pericarditis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	4	1	4	1
88. Acute endocarditis and myocarditis	...	...	...	...	...	...	1	...	1	2	1	...	...	...	...	...	...	...	..	...	...	...	3	2	...	..	7	...	7	...	10	2
89. Angina pectoris	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	2	1
90. Other diseases of the heart	...	...	...	...	1	1	...	1	1	...	...	...	5	2	3	5	9	4	...	3	...	...	19	16	...	...	7	2	7	2	26	18
91. Diseases of the arteries	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	1	...	1	...	...	...	6	...	...	...	...	...	...	...	6	...
92 Embolism and thrombosis (not cerebral)	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	3	...	3	...	4	1
95. Hæmorrhage without stated cause	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	2	...
96. Other diseases of the circulatory system	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
Carried forward	16	9	10	10	13	8	14	3	14	7	10	13	22	16	19	10	25	11	7	5	2	...	152	92	12	6	250	18	262	24	414	116

Name of disease	EUROPEANS																								NATIVES						Grand totals	
	0-1		1-5		5-15		15-25		25-35		35-45		45-55		55-65		65-75		75-85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	16	9	10	10	13	8	14	3	14	7	10	13	22	16	19	10	25	11	7	5	2	...	152	92	12	6	250	18	262	24	414	116
V. DISEASES OF THE RESPIRATORY SYSTEM.																																
97. Diseases of the nasal fossæ and annexa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
98. Diseases of the larynx	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	1	...	1	3	1
99. Bronchitis	2	...	1	...	...	...	...	...	...	...	...	...	...	2	1	1	...	...	1	...	...	...	5	3	1	1	...	1	1	2	6	5
100. Broncho-pneumonia	...	3	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	3	3	8	4	8	1	16	5	19	8
101. Pneumonia, lobar, or not otherwise defined	1	1	...	2	1	1	2	...	...	...	3	...	5	3	2	...	1	...	...	...	...	...	15	7	8	4	214	7	222	11	237	18
102. Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	3	...	3	...	4	...
103 Congestion and hæmorrhagic infarct of lung	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
105. Asthma	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
107. Other diseases of the respiratory system	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	..	...	...	2	...	...	...	...	...	...	...	2	...
VI. DISEASES OF THE DIGESTIVE SYSTEM.																																
108. Diseases of the buccal cavity and annexa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2	...
109. Diseases of the pharynx and tonsils	...	...	2	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	1	...	...	...	1	3	2
111. Ulcer of the stomach or duodenum	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...
112. Other diseases of the stomach	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	...	...	4	...	...	...	2	...	2	...	6	...
113 and 114. Diarrhœa and enteritis ...	7	5	...	2	...	..	...	...	...	...	..	...	...	1	...	1	...	1	...	...	...	...	8	8	7	4	6	...	13	4	21	12
117. Appendicitis	...	...	...	...	...	1	1	...	...	...	2	...	2	...	2	1	...	...	...	...	...	...	7	2	..	...	2	...	2	...	9	2
118. Hernia, intestinal obstruction	1	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	3	1	...	1	4	...	4	1	7	2
119. Other diseases of the intestines	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	2	...
120. Acute yellow atrophy of the liver ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	4	...	5	...	5	...
122. Cirrhosis of the liver	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...	...	...	...	...	...	...	...	3	1	...	...	11	2	11	2	14	3
123. Biliary calculi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	..	...	...	...	...	...	...	1
124. Other diseases of the liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...	3	...
126. Peritonitis without stated cause ...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	1	...	...	...	...	...	...	...	...	4	...	...	7	3	7	3	7	7
VII. NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.																																
128. Acute nephritis (including unspecified under 10 years of age) ...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	...	..	...	...	...	...	2	1	1	...	2	...	3	...	5	1
129. Chronic nephritis (including unspecified over 10 years of age)	...	...	...	...	...	...	...	...	...	1	...	...	2	2	1	3	...	...	...	...	...	...	6	3	...	...	5	2	5	2	11	5
131. Other diseases of the kidney and annexa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
Carried forward	27	18	17	14	15	11	18	3	15	11	18	14	34	24	36	15	31	12	9	6	2	...	222	128	38	21	525	35	563	56	785	184

Name of disease	EUROPEANS.																						NATIVES.						Grand totals	
	0-1		1-5		5-15		15-25		25-35		35-45		45-55		55-65		65-75		75-85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	27	18	17	14	15	11	18	3	15	11	18	14	34	24	36	15	31	12	9	6	2	...	222	128	38	21	525	35	563	56	785	184
132. Calculi of the urinary passages ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
133. Diseases of the bladder	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
136. Non-venereal diseases of the male genital organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	2	...
137. Cysts and other tumours of the ovary not returned as malignant	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	2	...	...	.	...	...	...	...	2
138. Salpingitis and pelvic abscess in females	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	1	...	1	...	4
139. Tumours of the uterus not returned as malignant	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
VIII. THE PUERPERAL STATE.																																
143. Accidents of pregnancy	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	2	...	4
144. Puerperal hæmorrhage	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	1	...	1	...	1
145. Other accidents of child-birth	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	5	...	5	...	6
146. Puerperal sepsis	...	...	...	...	...	...	...	...	..	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2
148. Puerperal albuminuria and convulsions	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
IX. DISEASES OF THE SKIN AND CELLULAR TISSUE.																																
151. Gangrene	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	1	5	1	5	1
152. Carbuncle, boil	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	1	1
153. Cellulitis, acute abscess	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
X. DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																																
155. Diseases of the bones	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	1	...	...	1	...	1	...	1	1
XI. CONGENITAL MALFORMATIONS.																																
159. Congenital malformations	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
XII. DISEASES OF EARLY INFANCY.																																
160. Congenital debility, sclerema and icterus	7	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	6	3	1	...	...	3	1	10	7
161. Premature birth, injury at birth ...	8	5	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	8	5	3	3	...	..	3	3	11	8
162. Other diseases peculiar to early infancy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...
XIII. OLD AGE.																																
164. Old age	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	4	5	...	...	5	6	...	...	3	...	3	...	8	6
Carried forward	42	30	17	15	15	11	18	3	15	15	18	18	35	27	37	16	32	13	13	11	2	...	244	159	46	25	537	46	583	71	827	230

Name of disease	EUROPEANS.																								NATIVES.						Grand totals	
	0-1		1-5		5-15		15-25		25-35		35-45		45-55		55-65		65-75		75-85		Age unknown		Totals		Under 5 years.		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	42	30	17	15	15	11	18	3	15	15	18	18	35	27	37	16	32	13	13	11	2	...	244	159	46	25	537	46	583	71	827	230
XIV. EXTERNAL CAUSES.																																
165 and 166. Suicide by solid or liquid poisons and corrosive substances	...	...	...	...	...	...	...	...	1	1	...	...	1	.	1	...	...	...	...	...	...	...	3	1	...	...	...	...	...	...	3	1
170. Suicide by firearms	...	...	...	...	...	...	...	...	2	...	1	...	2	...	2	...	1	...	...	...	1	...	9	...	...	...	1	...	1	...	10	...
171. Suicide by cutting or piercing instruments	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...
176. Poisoning by venomous animals ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
177. Other acute accidental poisoning (not by gas)	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
178. Conflagration	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	2	...	2	...	6	2	8	2	10	2
179. Accidental burns (conflagration excepted)	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	1	1
180. Accidental mechanical suffocation ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	1	1	1
181. Accidental absorption of irrespirable or poisonous gas	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
182. Accidental drowning	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
183. Accidental injury by firearms	...	...	...	...	...	...	1	...	3	...	1	...	...	...	1	...	...	...	...	...	...	...	6	...	...	...	2	...	2	...	8	...
186. Accidental injury in mining and quarrying	...	...	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	..	...	...	...	...	...	...	...	4	...	4	...	4	...
188. Accidental injury by other forms of crushing (road vehicles, on railways, etc.)	...	...	...	...	...	...	6	...	3	...	1	...	...	...	1	...	...	...	...	...	...	...	11	...	...	...	5	...	5	...	16	...
189. Injury by animals (poisoning by venomous animals excepted) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
195. Lightning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
196. Electricity (lightning excepted)	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	3	...	...	...	1	...	1	...	4	...
198. Homicide by cutting or piercing instruments	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	1	1
199. Homicide by other means	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
201. Fracture (cause not specified)	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	1	1	...	...	5	...	5	...	6	1
202. Other and unstated forms of accidental violence, execution	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	7	...	7	...	8	...
203. Violent deaths of unstated nature (i.e., accidental, suicidal, etc.) and cause	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	1	...	1	...	3	...
XV. ILL-DEFINED DISEASES.																																
204. Sudden death	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	1	...	1	...	..	...	...	3	2	...	...	...	...	...	...	3	2
205. Cause of death unstated or ill-defined	1	...	...	...	...	1	1	...	...	...	2	1	5	...	2	1	2	...	...	...	...	...	13	3	1	...	11	1	12	1	25	4
Totals	43	30	17	16	15	13	27	4	29	16	24	19	47	27	46	18	36	14	13	12	3	...	300	169	50	26	587	50	637	76	937	245

Table XVI.

CLASSIFICATION OF DEATHS (EUROPEANS), 1929.

Deaths classified according to the International List of Causes of Death.

I.—GENERAL DISEASES.

Classification No.	Disease.	No. of Deaths
1	Enteric fever	13
5	Malaria	30
7	Measles	1
9	Whooping cough	6
10	Diphtheria	5
11	Influenza	15
16	Dysentery	3
21	Erysipelas	1
24	Meningococcal meningitis	8
25.3	Blackwater fever	12
29	Tetanus	1
31	Tuberculosis of the respiratory system	12
32	Tuberculosis of the central nervous system	2
36	Tuberculosis of other organs	1
37	Disseminated tuberculosis	1
38	Syphilis	2
41	Purulent infection, septicæmia	5

II.—GENERAL DISEASES NOT INCLUDED ABOVE.

43	Cancer of the buccal cavity	1
44	Cancer of the pharynx, œsophagus, stomach, liver and annexa	10
45	Cancer of the peritoneum, intestines and rectum	5
46	Cancer of the female genital organs	2
47	Cancer of the breast	3
48	Cancer of the skin	1
49	Cancer of other or unspecified organs	10
50	Tumours not returned as malignant (brain and female genital organs excepted)	1
52	Chronic rheumatism, osteo-arthritis, gout	1
57	Diabetes	2
64	Diseases of the spleen	1
65	Leukæmia, lymphadenoma	2
66	Alcoholism (acute or chronic)	4
69	Other general diseases	2

III.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.

71	Meningitis	6
74	Cerebral hæmorrhage, apoplexy, etc.	10
75	Paralysis of unstated origin	1
77	Other forms of insanity	2
78	Epilepsy	3
80	Infantile convulsions (under 5 years of age)	2
81	Chorea	1
84	Other diseases of the nervous system	2
86	Diseases of the ear and of the mastoid sinus	3

IV.—DISEASES OF THE CIRCULATORY SYSTEM.

88	Acute endocarditis and myocarditis	5
89	Angina pectoris	3
90	Other diseases of the heart	35
91	Diseases of the arteries	6
92	Embolism and thrombosis (not cerebral)	2

V.—DISEASES OF THE RESPIRATORY SYSTEM.

97	Diseases of the nasal fossæ and annexa	1
98	Diseases of the larynx	3
99	Bronchitis	8
100	Broncho-pneumonia	6
101	Pneumonia, lobar, or not otherwise defined	22
102	Pleurisy	1
103	Congestion and hæmorrhagic infarct of lung	1
105	Asthma	1
107	Other diseases of the respiratory system	2
	Carried forward	289

VI.—DISEASES OF THE DIGESTIVE SYSTEM.

Classification No.	Disease.	No. of Deaths
	Brought forward	289
108	Diseases of the buccal cavity and annexa	1
109	Diseases of the pharynx and tonsils	4
111	Ulcer of the stomach or duodenum	2
112	Other diseases of the stomach	4
113 and 114	Diarrhœa and enteritis	17
117	Appendicitis	9
118	Hernia, intestinal obstruction	4
122	Cirrhosis of the liver	4
123	Biliary calculi	1
126	Peritonitis without stated cause	4

VII.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.

128	Acute nephritis (including unspecified under 10 years of age)	3
129	Chronic nephritis (including unspecified over 10 years of age)	9
132	Calculi of the urinary passages	1
133	Diseases of the bladder	1
137	Cysts and other tumours of the ovary not returned as malignant	2
138	Salpingitis and pelvic abscess in females	3
139	Tumours of the uterus not returned as malignant	1

VIII.—THE PUERPERAL STATE.

143	Accidents of pregnancy	2
145	Other accidents of child-birth	1
146	Puerperal sepsis	1
148	Puerperal albuminuria and convulsions	1

IX.—DISEASES OF THE SKIN AND CELLULAR TISSUE.

152	Carbuncle, boil	1

X.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.

155	Diseases of the bones	1

XI.—CONGENITAL MALFORMATIONS.

159	Congenital malformations	1

XII.—DISEASES OF EARLY INFANCY.

160	Congenital debility, sclerema and icterus	12
161	Premature birth, injury at birth	13

XIII.—OLD AGE.

164	Old age	11

XIV.—EXTERNAL CAUSES.

165 and 166	Suicide by solid or liquid poisons and corrosive substances	4
170	Suicide by firearms	9
171	Suicide by cutting or piercing instruments	2
178	Conflagration	2
179	Accidental burns (conflagration excepted)	1
181	Accidental absorption of irrespirable or poisonous gas	1
182	Accidental drowning	1
183	Accidental injury by firearms	6
188	Accidental injury by other forms of crushing (road vehicles, on railways, etc.)	11
196	Electricity (lightning excepted)	3
201	Fracture (cause not specified)	2
202	Other and unstated forms of accidental violence. Execution	1
203	Violent deaths of unstated nature (i.e., accidental, suicidal, etc.) and cause	2

XV.—ILL-DEFINED DISEASES.

204	Sudden death	5
205	Cause of death unstated or ill-defined	16
	Total	469

Table XVII.

CLASSIFICATION OF DEATHS (NATIVES AND COLOURED), 1929.

Deaths classified according to the International List of Causes of Death.

I.—GENERAL DISEASES.

Classification No.	Disease.	No. of Deaths
1	Enteric fever	6
5	Malaria	26
11	Influenza	6
16	Dysentery	13
24	Meningococcal meningitis	15
25	Other epidemic and endemic diseases	1
25.3	Blackwater fever (Cape coloured)	1
29	Tetanus	2
31	Tuberculosis of the respiratory system	66
32	Tuberculosis of the central nervous system	2
33	Tuberculosis of the intestines and peritoneum	4
34	Tuberculosis of the vertebral column	4
37	Disseminated tuberculosis	7
38	Syphilis	7
40	Gonococcal infection	1
41	Purulent infection, septicæmia	14

II.—GENERAL DISEASES NOT INCLUDED ABOVE.

44	Cancer of the pharynx, œsophagus, stomach, liver and annexa	6
45	Cancer of the peritoneum, intestines and rectum	1
47	Cancer of the breast	1
49	Cancer of other or unspecified organs	1
51	Rheumatic fever	1
53	Scurvy	14
54	Pellagra	2
58	Anæmia, chlorosis	1
64	Diseases of the spleen	2
69	Other general diseases	3

III.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.

70	Encephalitis	1
71	Meningitis	20
74	Cerebral hæmorrhage, apoplexy, etc.	2
75	Paralysis of unstated origin	2
77	Other forms of insanity	15
78	Epilepsy	6
79	Convulsions (non-puerperal, 5 years and over)	1
80	Infantile convulsions (under 5 years of age)	2
82	Hysteria and neuritis	1
84	Other diseases of the nervous system	1
86	Diseases of the ear and of the mastoid sinus	1

IV.—DISEASES OF THE CIRCULATORY SYSTEM.

87	Pericarditis	5
88	Acute endocarditis and myocarditis	7
90	Other diseases of the heart	9
92	Embolism and thrombosis (not cerebral)	3
95	Hæmorrhage without stated cause	2
96	Other diseases of the circulatory system	1

V.—DISEASES OF THE RESPIRATORY SYSTEM.

98	Diseases of the larynx	1
99	Bronchitis	3
100	Broncho-pneumonia	21
101	Pneumonia, lobar, or not otherwise defined	233
102	Pleurisy	3

VI.—DISEASES OF THE DIGESTIVE SYSTEM.

108	Diseases of the buccal cavity and annexa	1
109	Diseases of the pharynx and tonsils	1
112	Other diseases of the stomach	2
	Carried forward	551

Classification No.	Disease.	No. of Deaths
	Brought forward	551
113 and 114	Diarrhœa and enteritis	17
117	Appendicitis	2
118	Hernia, intestinal obstruction	5
119	Other diseases of the intestines	2
120	Acute yellow atrophy of the liver	5
122	Cirrhosis of the liver	13
124	Other diseases of the liver	3
126	Peritonitis without stated cause	10
	VII.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.	
128	Acute nephritis (including unspecified under 10 years of age)	3
129	Chronic nephritis (including unspecified over 10 years of age)	7
131	Other diseases of the kidney and annexa	1
136	Non-venereal diseases of the male genital organs	2
138	Salpingitis and pelvic abscess in females	1
	VIII.—THE PUERPERAL STATE.	
143	Accidents of pregnancy	2
144	Puerperal hæmorrhage	1
145	Other accidents of child-birth	5
146	Puerperal sepsis	1
	IX.—DISEASES OF THE SKIN AND CELLULAR TISSUE.	
151	Gangrene	6
152	Carbuncle, boil	1
153	Cellulitis, acute abscess	1
	X.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.	
155	Diseases of the bones	1
	XII.—DISEASES OF EARLY INFANCY.	
160	Congenital debility, sclerema and icterus	4
161	Premature birth, injury at birth	6
162	Other diseases peculiar to early infancy	1
	XIII.—OLD AGE.	
164	Old age	3
	XIV.—EXTERNAL CAUSES.	
170	Suicide by firearms	1
176	Poisoning by venomous animals	1
177	Other acute accidental poisoning (not by gas)	1
178	Conflagration	10
179	Accidental burns (conflagration excepted)	1
180	Accidental mechanical suffocation	2
183	Accidental injury by firearms	2
186	Accidental injury in mining and quarrying	4
188	Accidental injury by other forms of crushing (road vehicles, on railways, etc.)	5
189	Injury by animals (poisoning by venomous animals excepted)	1
195	Lightning	1
196	Electricity (lightning excepted)	1
198	Homicide by cutting or piercing instruments	2
199	Homicide by other means	1
201	Fracture (cause not specified)	5
202	Other and unstated forms of accidental violence. Execution	7
203	Violent deaths of unstated nature (i.e., accidental, suicidal, etc.) and cause	1
	XV.—ILL-DEFINED DISEASES.	
205	Cause of death unstated or ill-defined	13
	Total	713

Table XVIII.

Return of diseases and deaths (in-patients) in all Government hospitals for the year 1929.

EUROPEANS.

Diseases	Remaining in hospital at end of 1928	Yearly total: Admissions	Yearly total: Deaths	Total cases treated	Remaining in hospital at end of 1929
INFECTIVE DISEASES.					
Cerebro-spinal fever	...	5	5	5	...
Diphtheria	...	17	5	17	...
Dysentery—Amœbic	3	67	1	70	2
Bacillary	...	4	...	4	1
Enteric	12	57	12	69	5
Erysipelas	...	2	1	2	...
Influenza	2	141	1	143	1
Malaria—(a) Tertian	10	436	8	446	7
(b) Quartan	...	37	1	37	...
(c) Æstivo-autumnal	3	173	5	176	1
(d) Chronic	...	23	1	23	...
(e) Blackwater	...	22	4	22	1
Malta fever	...	6	...	6	1
Pneumonia	7	79	13	86	1
Rheumatic fever	2	11	...	13	1
Septicæmia	1	5	3	6	...
Trypanosomiasis (sleeping sickness)	...	1	...	1	...
Syphilis—(a) Primary	...	1	...	1	...
(b) Secondary	...	2	...	2	...
(c) Inherited	...	1	...	1	...
Tetanus	...	1	1	1	...
Tuberculosis	12	38	8	50	9
Whooping cough	...	4	...	4	...
Others	...	12	...	12	...
INTOXICATIONS.					
Alcoholism	1	14	...	15	...
GENERAL DISEASES.					
Anæmia	...	16	...	16	...
Anæmia—Pernicious	...	1	...	1	1
Diabetes	1	7	1	8	...
Exophthalmic goitre	...	3	...	3	...
Gout	...	1	...	1	...
Leucocythæmia	...	1	...	1	...
Hodgkin's disease	...	2	1	2	...
Purpura	...	1	...	1	...
Others	...	22	1	22	1
LOCAL DISEASES.					
Diseases of the nervous system—					
Sub-section 1—					
Neuritis	3	36	...	39	4
Meningitis	...	4	4	4	...
Myelitis	...	4	...	4	2
Encephalitis	...	2	...	2	...
Abscess of brain	...	3	3	3	...
Congestion of brain	...	11	3	11	...
Sub-section 2—					
Apoplexy	1	8	2	9	2
Paralysis	1	5	...	6	4
Chorea	...	4	1	4	1
Epilepsy	...	26	...	26	1
Neuralgia	...	4	...	4	...
Hysteria	...	11	...	11	...
Others	...	2	...	2	...
Sub-section 3—Mental diseases—					
Idiocy	...	1	...	1	...
Mania	...	1	...	1	...
Dementia	...	2	...	2	...
Others	...	1	...	1	...
Carried forward	59	1,338	85	1,397	46

Diseases	Remaining in hospital at end of 1928	Yearly total: Admissions	Yearly total: Deaths	Total cases treated	Remaining in hospital at end of 1929
Brought forward	59	1,338	85	1,397	46
Diseases of the eye—					
Conjunctivitis	...	17	...	17	...
Keratitis	...	4	...	4	...
Ulceration of cornea	...	9	...	9	...
Iritis	1	5	...	6	...
Optic neuritis	1	...	...	1	1
Cataract	...	14	...	14	1
Others	...	12	...	12	...
Diseases of the ear—					
Inflammation	...	25	...	25	1
Other diseases	3	5	...	8	2
Diseases of the nose	1	40	...	41	...
Diseases of the circulatory system—					
Pericarditis	...	8	1	8	2
Endocarditis	2	20	7	22	2
Valvular mitral	...	14	...	14	...
Aortic	...	2	1	2	...
Arterial sclerosis	...	5	1	5	1
Aneurism	1	4	2	5	1
Others	1	35	5	36	2
Diseases of the respiratory system—					
Laryngitis	...	14	1	14	...
Bronchitis	3	71	2	74	4
Broncho-pneumonia	...	21	3	21	...
Pleurisy	1	32	...	33	1
Empyema	...	2	...	2	...
Others	...	23	1	23	...
Diseases of the digestive system—					
Stomatitis	...	15	...	15	...
Caries of teeth	...	87	...	87	...
Sore throat	..	162	...	162	...
Inflammation of tonsils	...	248	...	248	2
Gastritis	3	55	...	58	4
Ulceration of stomach	...	14	1	14	1
Hæmatemesis	...	2	...	2	...
Dilatation of stomach	...	3	...	3	...
Stricture of stomach	...	4	...	4	...
Dyspepsia	...	11	...	11	...
Enteritis	2	43	3	45	2
Appendicitis	16	436	12	452	17
Colitis	2	34	1	36	...
Ulceration of intestines	...	12	2	12	...
Hernia	5	50	...	55	3
Diarrhœa	1	23	1	24	...
Constipation	...	12	1	12	1
Colic	...	10	...	10	...
Hæmorrhoids	1	38	...	39	1
Hepatitis—Acute	1	18	...	19	1
Abscess	3	22	1	25	...
Others	...	8	...	8	...
Cirrhosis	1	7	4	8	...
Jaundice	1	17	...	18	2
Peritonitis	1	8	7	9	...
Ascites	...	1	...	1	...
Gall stones	3	28	...	31	...
Others	...	7	2	7	1
Diseases of the lymphatic system—					
Splenitis	...	3	1	3	...
Inflammation of lymphatic gland	...	7	...	7	1
Suppuration of lymphatic gland	...	1	...	1	...
Lymphangitis	...	1	...	1	...
Others	...	5	1	5	...
Diseases of the urinary system—					
Acute nephritis	...	15	5	15	1
Bright's disease	...	10	2	10	...
Pyelitis	3	27	1	30	2
Calculus	...	4	1	4	...
Renal colic	1	9	...	10	1
Cystitis	1	27	...	28	3
Suppression	...	3	...	3	...
Others	2	13	2	15	...
Carried forward	120	3,220	157	3,340	107

Diseases	Remaining in hospital at end of 1928	Yearly total		Total cases treated	Remaining in hospital at end of 1929
		Admissions	Deaths		
Brought forward	120	3,220	157	3,340	107
Diseases of the generative system—					
Male organs—					
Urethritis	...	17	...	17	...
Stricture	...	7	...	7	...
Prostatitis	1	6	...	7	1
Hydrocele	...	1	...	1	...
Orchitis	2	9	...	11	...
Epididymitis	...	8	...	8	...
Abscess of testicle	...	2	...	2	...
Others	...	10	...	10	...
Female organs—					
Ovaritis	...	10	...	10	...
Ovarian cyst	...	14	1	14	...
Endometritis	1	49	1	50	1
Displacement of uterus	1	22	...	23	...
Vaginitis	1	5	...	6	...
Dysmenorrhœa	...	6	...	6	...
Menorrhagia	...	12	...	12	...
Leucorrhœa	...	4	...	4	...
Abortion	2	91	...	93	...
Delayed labour	...	5	...	5	1
Retained placenta	...	1	...	1	...
Premature birth	...	2	1	2	...
Puerperal septicæmia	...	5	1	5	1
Mastitis	...	1	...	1	...
Abscess of breast	...	3	...	3	...
Others	1	81	1	82	4
Diseases of organs of locomotion—					
Osteitis	1	10	...	11	2
Arthritis	...	18	...	18	...
Spondylitis	...	5	...	5	...
Bursitis	...	5	...	5	...
Others	2	14	...	16	2
Diseases of connective tissue—					
Cellulitis	1	72	1	73	5
Abscess	3	68	...	71	3
Others	1	24	1	25	1
Diseases of the skin—					
Urticaria	...	6	...	6	...
Eczema	1	8	...	9	1
Boil	...	13	...	13	...
Carbuncle	1	9	...	10	...
Herpes	...	5	...	5	...
Psoriasis	...	1	...	1	...
Oriental sore	...	1	...	1	...
Acne	...	1	...	1	...
Others	2	26	1	28	3
Injuries—General	5	94	7	99	4
Local	22	450	2	472	13
Fractures	2	77	5	79	2
Surgical operations—Not classified	1	80	1	81	2
Tumours	2	53	10	55	3
Carcinoma	1	12	4	13	...
Malformations	...	7	...	7	1
Poisons	2	13	3	15	...
Parasites—Protozoa	...	4	...	4	...
Bilharziasis	...	7	...	7	1
Cestoda—					
Tænia solium	...	3	...	3	1
Tænia saginata	...	6	...	6	...
Nematoda—					
Oxyuris	...	1	...	1	...
Not otherwise classified	9	357	3	366	15
Total	185	5,041	200	5,226	174

Table XIX.

Return of diseases and deaths (in-patients) in all Government hospitals for the year 1929.

NATIVES.

Diseases	Remaining in hospital at end of 1928	Yearly total: Admissions	Yearly total: Deaths	Total cases treated	Remaining in hospital at end of 1929
INFECTIVE DISEASES.					
Cerebro-spinal fever	...	23	17	23	1
Chicken-pox	...	8	...	8	...
Diphtheria	...	1	...	1	...
Dysentery—Amœbic	3	59	9	62	2
Bacillary	6	11	3	17	1
Enteric	1	21	5	22	2
Erysipelas	...	3	...	3	...
Gonorrhœa	21	124	2	145	8
Influenza	2	336	4	338	1
Leprosy—(a) Nodular	...	9	...	9	...
(b) Anæsthetic	...	2	...	2	1
Malaria—(a) Tertian	3	192	10	195	2
(c) Æstivo-autumnal	9	247	11	256	4
(e) Blackwater	...	1	...	1	...
Measles	...	1	...	1	...
Malta fever	...	1	...	1	1
Pneumonia	36	732	230	768	38
Relapsing fever	...	2	...	2	...
Rheumatic fever	...	17	...	17	1
Septicæmia	1	16	15	17	...
Trypanosomiasis (sleeping sickness)	...	1	1	1	...
Smallpox	...	2	1	2	...
Syphilis—(a) Primary	25	416	2	441	60
(b) Secondary	37	294	5	331	39
(c) Inherited	2	6	1	8	...
(d) Tertiary	2	2	...	4	...
Tetanus	...	7	2	7	1
Tuberculosis	16	122	79	138	9
Whooping cough	...	15	...	15	...
Yaws	27	191	4	218	45
Others	...	4	...	4	...
INTOXICATIONS.					
Alcoholism	...	3	...	3	...
GENERAL DISEASES.					
Anæmia	...	7	1	7	...
Debility	...	13	...	13	...
Diabetes	...	2	...	2	...
Exophthalmic goitre	2	1	...	3	...
Myxœdema	...	2	...	2	...
Scurvy	38	86	14	124	4
Others	5	48	1	53	2
LOCAL DISEASES.					
Diseases of the nervous system—					
Sub-section 1—					
Neuritis	3	42	1	45	3
Meningitis	2	45	28	47	1
Encephalitis	2	1	1	3	...
Abscess of brain	...	6	3	6	...
Congestion of brain	...	6	3	6	...
Sub-section 2—					
Apoplexy	...	3	2	3	...
Paralysis	6	18	4	24	10
Epilepsy	5	51	9	56	10
Neuralgia	...	2	...	2	...
Hysteria	...	2	...	2	...
Others	...	3	1	3	...
Carried forward	254	3,207	469	3,461	246

Diseases	Remaining in hospital at end of 1928	Yearly total: Admissions	Yearly total: Deaths	Total cases treated	Remaining in hospital at end of 1929
Brought forward	254	3,207	469	3,461	246
Diseases of the nervous system (cont.)—					
Sub-section 3—Mental diseases—					
Mania	...	5	...	5	...
Melancholia	...	2	...	2	...
Dementia	...	11	...	11	...
Others	...	1	...	1	...
Diseases of the eye—					
Conjunctivitis	7	82	...	89	3
Keratitis	1	9	...	10	1
Ulceration of cornea	2	21	...	23	1
Iritis	1	13	...	14	1
Optic neuritis	...	2	...	2	1
Cataract	1	9	...	10	1
Others	2	12	...	14	...
Diseases of the ear—					
Inflammation	1	14	1	15	1
Other diseases	...	10	...	10	...
Diseases of the nose	...	5	1	5	...
Diseases of the circulatory system—					
Pericarditis	...	4	4	4	...
Endocarditis	1	16	13	17	1
Valvular mitral	1	12	4	13	...
Aortic	...	1	...	1	...
Others	2	10	2	12	...
Diseases of the respiratory system—					
Laryngitis	...	13	...	13	...
Bronchitis	2	65	5	67	...
Broncho-pneumonia	1	22	8	23	...
Abscess of lung	...	1	1	1	...
Gangrene of lung	...	1	1	1	...
Pleurisy	1	27	2	28	3
Empyema	1	2	1	3	1
Asthma	...	10	...	10	...
Others	2	116	2	118	20
Diseases of the digestive system—					
Stomatitis	1	6	...	7	1
Caries of teeth	...	27	...	27	...
Sore throat	...	10	...	10	...
Inflammation of tonsils	...	38	...	38	...
Gastritis	...	18	...	18	...
Ulceration of stomach	...	1	1	1	...
Stricture of stomach	1	...	...	1	...
Dyspepsia	1	12	...	13	2
Enteritis	1	9	6	10	...
Appendicitis	1	18	5	19	4
Colitis	...	9	2	9	...
Ulceration of intestines	...	3	2	3	...
Hernia	...	26	1	26	2
Diarrhœa	1	21	1	22	3
Constipation	3	48	...	51	1
Colic	...	29	...	29	...
Hæmorrhoids	...	3	...	3	...
Hepatitis—Acute	...	10	4	10	1
Abscess	...	13	3	13	...
Others	...	4	...	4	...
Cirrhosis	...	8	5	8	...
Jaundice	...	2	...	2	...
Peritonitis	1	8	7	9	1
Ascites	1	11	4	12	2
Others	4	11	13	15	...
Diseases of the lymphatic system—					
Splenitis	...	4	2	4	...
Inflammation of lymphatic gland	...	13	...	13	...
Suppuration of lymphatic gland	...	2	...	2	1
Lymphangitis	3	21	1	24	1
Others	...	4	...	4	...
Diseases of the urinary system—					
Acute nephritis	...	12	6	12	1
Bright's disease	2	4	2	6	...
Pyelitis	...	3	...	3	...
Cystitis	1	12	...	13	1
Suppression	...	3	1	3	...
Hæmaturia	...	2	..	2	1
Others	...	3	...	3	1
Carried forward	301	4,131	280	4,432	303

Diseases	Remaining in hospital at end of 1928	Yearly total		Total cases treated	Remaining in hospital at end of 1929
		Admissions	Deaths		
Brought forward	301	4,131	280	4,432	303
Diseases of the generative system—					
Male organs—					
Urethritis	1	12	...	13	...
Stricture	...	13	..	13	...
Condyloma	...	1	...	1	...
Inflammation of scrotum	...	4	...	4	...
Hydrocele	...	5	...	5	1
Orchitis	...	14	...	14	...
Epididymitis	...	4	...	4	...
Others		56	...	56	1
Female organs—					
Ovaritis	...	1	...	1	...
Ovarian cyst	..	2	...	2	...
Endometritis	...	2	...	2	...
Displacement of uterus	...	4	...	4	1
Vaginitis	1	4	...	5	...
Dysmenorrhœa	...	1	...	1	...
Menorrhagia	...	2	...	2	...
Abortion	...	6	1	6	...
Delayed labour	...	16	3	16	...
Retained placenta	...	9	1	9	...
Puerperal septicæmia	...	1	1	1	...
Mastitis	...	8	...	8	1
Abscess of breast	...	1	...	1	...
Others	1	10	1	11	...
Diseases of organs of locomotion—					
Osteitis	5	9	1	14	...
Arthritis	...	15	...	15	3
Spondylitis	...	3	...	3	1
Bursitis	...	8	...	8	1
Others	3	34	1	37	6
Diseases of connective tissue—					
Cellulitis	4	107	3	111	17
Abscess	8	129	1	137	10
Others	1	40	...	41	...
Diseases of the skin—					
Urticaria	...	1	...	1	...
Eczema	...	9	...	9	...
Boil	...	11	...	11	...
Carbuncle	...	1	...	1	...
Herpes	...	2	...	2	...
Psoriasis	...	1	...	1	...
Oriental sore	...	26	1	26	6
Tinea	...	1	...	1	...
Scabies	...	18	...	18	3
Others	15	239	...	254	36
Injuries—General	27	282	43	309	28
Local	68	1,181	17	1,249	87
Burns	1	49	8	50	8
Others	16	109	5	125	20
Surgical operations—Not classified	2	30	2	32	...
Minor, not classified	...	17	...	17	...
Tumours	4	33	7	37	2
Carcinoma	...	5	5	5	...
Malformations	...	1	...	1	...
Poisons	2	32	3	34	1
Parasites—Animal	...	4	...	4	...
Protozoa	...	2	...	2	...
Bilharziasis	...	16	...	16	1
Cestoda—					
Tænia solium	...	3	...	3	3
Tænia saginata	...	2	...	2	1
Nematoda—					
Ankylostomiasis	...	29	...	29	1
Not otherwise classified	21	390	18	411	26
Total	481	7,146	702	7,627	568

Table XX.

Table giving the number of beds in each Government Hospital and Ingutsheni Mental Hospital, the daily average number of patients treated, the revenue and expenditure of each, and the approximate charge on public funds for each patient in hospital during 1929.

Name of hospital.	No. of beds.		Daily average of patients treated.			No. of nursing staff.	No. of native staff.	Gross expenditure.	Revenue.	Deficit of revenue over expenditure	Approximate charge on public funds for each patient treated.
	White.	Coloured and native.	White.	Coloured and native.	Total white, coloured and native.						
								£	£	£	£ s. d.
Salisbury	91	109	75.93	82.23	158.16	57	72	27,710	11,721	15,989	4 8 4
Bulawayo	86	86	64.99	109.09	174.08	41	73	22,310	10,923	11,387	3 5 9
Umtali	30	20	16.43	17.61	34.04	7	16	4,714	2,076	2,638	3 1 2
Gwelo	30	53	15.66	47.2	62.68	8	17	5,662	1,983	3,679	3 6 0
Ft. Victoria	14	20	6.15	10.19	16.34	4	14	2,408	870	1,538	4 1 0
Gwanda	8	26	1.63	17.41	19.04	2	6	1,130	388	742	2 1 7
Enkeldoorn	11	7	2.62	7.21	9.83	3	6	1,481	179	1,302	6 7 8
Gatooma	23	96	9.4	53.78	62.82	7	22	5,138	1,765	3,373	4 2 0
Shamva	17	26	1.98	27.95	28.93	3	13	1,719	335	1,384	2 18 2
Sinoia	8	26	3.56	17.50	21.06	4	12	2,336	642	1,694	3 7 1
Belingwe	7	9	0.79	3.04	3.83	1	3	517	69	448	7 11 10
Ingutsheni Mental Hospital	72	270	50.82	190.57	241.39	14	22	7,923	1,276	6,647	*18 13 1

* In calculating this figure, the value of produce from hospital farm and garden, £790, has been deducted from total expenditure.

TABLE XXI.

STATEMENT OF PROGRESS AT GOVERNMENT HOSPITALS AND ASYLUMS FOR THE YEAR 1929.

Name of hospital.	Total number of patients maintained.	Total expenditure.	NO. OF UNITS MAINTAINED.						EXPENDITURE.																EARNINGS.				REVENUE RECEIVED.								TOTAL AMOUNT OUTSTANDING.	
			Staff		Patients.		Total.		Provisions and produce, purchases, excluding produce.	Per cent. of total.	Drugs, surgical instruments and sundries.	Per cent. of total.	Furniture, equipment, clothing and repairs.	Per cent. of total.	Fuel, light and water.	Per cent. of total.	Laundry staff and materials.	Per cent. of total.	Sanitary.	Per cent. of total.	Salaries.	Per cent. of total.	Office, miscellaneous expenses and railage.	Per cent. of total.	Paying patients.		Represented by treatment of free patients; allowing 5/- a day for whites and 2/6 a day for natives.	Total.	White.	Native.	Total.	Revenue per cent. of total expenditure.	Cost per caput per diem on previous expenditure basis.	Loss to Government represented by deficiency of revenue against expenditure, each patient.	Proportion of expenditure under Vote 7 B allocated on basis of European staff.	Per cent. of total.	At end of previous year.	At end of present year.
			White.	Native.	White.	Native.	White.	Native.																	White.	Native.												
		£							£		£		£		£		£		£		£		£		£	£	£	£	£	£	£		s. d.	£ s. d.	£		£	£
Salisbury	3,619	27,710	21,980	27,479	27,515	30,016	49,495	57,495	8,051	29.1	4,335	15.6	2,081	7.5	2,642	9.5	622	2.2	56	0.2	8,862	32.1	385	1.4	13,884	1,754	3,543	19,181	10,437	1,284	11,721	42.3	5 2	4 8 4	676	2.4	8,388	8,714
Bulawayo	3,462	22,310	19,472	25,678	23,722	40,116	43,194	65,794	5,781	25.9	3,288	14.7	1,644	7.4	2,070	9.3	408	1.8	126	0.6	8,068	36.2	439	2.0	11,119	2,091	4,840	18,050	9,158	1,765	10,923	49.0	4 1	3 5 9	486	2.1	8,260	8,418
Umtali	864	4,714	2,519	5,067	5,998	6,429	8,517	11,496	1,527	32.4	449	9.5	264	5.6	329	7.0	138	2.9	104	2.2	1,765	37.4	55	1.2	2,244	275	930	3,449	1,877	199	2,076	44.0	4 9	3 1 2	83	1.8	611	824
Gwelo	1,115	5,662	2,457	6,488	5,718	17,231	8,175	23,719	1,731	30.6	691	12.2	358	6.3	398	7.0	179	3.2	126	2.2	1,962	34.6	122	2.2	1,890	553	2,143	4,586	1,466	517	1,983	35.0	3 7	3 6 0	95	1.7	733	802
Fort Victoria	380	2,408	1,460	4,819	2,246	2,390	3,706	7,209	712	29.6	266	11.0	96	4.0	332	13.8	21	0.9	27	1.1	899	37.3	8	0.3	798	133	481	1,412	796	74	870	36.1	4 5	4 1 0	47	2.0	628	670
Gwanda	357	1,130	730	2,190	596	6,358	1,326	8,548	354	31.3	148	13.1	97	8.6	58	5.1	18	1.6	...	...	409	36.2	22	2.0	273	190	936	1,399	230	158	388	34.3	2 4	2 1 7	24	2.1	94	112
Enkeldoorn	204	1,481	779	1,887	959	2,632	1,738	4,519	458	30.9	106	7.2	334	22.5	47	3.2	44	3.0	29	2.0	414	27.9	13	0.9	131	48	445	624	129	50	179	12.1	4 9	6 7 8	36	2.4	164	116
Gatooma*	823	5,138	2,549	7,159	3,438	19,632	5,987	26,791	1,600	31.2	650	12.7	382	7.4	441	8.6	161	3.1	17	0.3	1,725	33.6	79	1.5	1,659	650	1,991	4,300	1,209	556	1,765	34.3	3 2	4 2 0	83	1.6	864	908
Shamva	476	1,719	937	4,745	724	10,205	1,661	14,950	579	33.7	187	10.9	112	6.5	83	4.8	22	1.3	40	2.3	644	37.5	16	0.9	278	200	1,135	1,613	203	132	335	19.5	2 1	2 18 2	36	2.1	206	222
Sinoia	505	2,336	1,309	4,125	1,301	6,389	2,610	10,514	682	29.2	286	12.2	332	14.2	97	4.2	42	1.8	42	1.8	788	33.7	20	0.9	555	346	474	1,375	348	294	642	27.5	3 7	3 7 1	47	2.0	648	752
Belingwe	59	517	354	1,095	29	1,110	383	2,205	180	34.8	39	7.5	40	7.7	22	4.3	2	0.4	...	...	220	42.6	2	0.4	23	10	133	166	51	18	69	13.3	4 0	7 11 10	12	2.3	81	21
Ingutsheni Mental	314	7,923	4,416	8,018	18,551	69,561	22,967	77,579	2,105†	26.6	107	1.4	881	11.1	311	3.9	75	0.9	...	...	3,964	50.0	314	4.0	865	798	11,677	13,340	509	767	1,276	16.1	1 7	18 13 1‡	166	2.1	778	1,051
Totals	12,178	83,048	58,962	98,750	90,797	212,069	149,759	310,819	23,760	28.6	10,552	12.7	6,621	8.0	6,830	8.2	1,732	2.1	567	0.7	29,720	35.8	1,475	1.8	33,719	7,048	28,728	69,495	26,413	5,814	32,227	38.8	3 7	4 3 6	1,791	2.1	21,455	22,610

* Not including V.D. patients.

† Includes £790, supplies from hospital farm and garden.
‡ In calculating this figure, the amount £790 as above has been deducted from total expenditure.

Table XXI. does not include a sum of £1,542 spent on general hospital stocks.

Sales of garden produce, £339.

Table XXII.

Return of Government and pauper patients treated in Government hospitals during 1929.

Name of hospital.	Number of free patients.			Total number of units treated.			Cost of maintenance.	Loss of revenue represented, reckoning 5s. a day for whites, and 2s. 6d. a day for natives, plus extras.
	White.	Native and coloured.	Totals.	White.	Native and coloured.	Totals.		
							£ s. d.	£ s. d.
Salisbury	234	723	957	5,043	18,253	23,296	6,033 14 6	3,542 7 6
Bulawayo	254	852	1,106	7,608	23,504	31,112	6,368 10 5	4,840 0 0
Umtali	43	227	270	1,388	4,666	6,054	1,426 0 0	930 5 0
Gwelo	100	437	537	2,066	13,013	15,079	2,676 18 2	2,143 2 6
Fort Victoria	40	108	148	547	2,756	3,303	728 13 9	481 5 0
Gwanda	6	177	183	606	6,271	6,877	787 0 4	935 7 6
Enkeldoorn	23	103	126	632	2,292	2,924	692 1 11	444 10 0
Gatooma	44	282	326	598	14,728	15,326	2,402 7 6	1,990 10 0
Shamva	14	289	303	233	8,611	8,844	915 4 6	1,134 12 6
Sinoia	13	155	168	127	3,541	3,668	652 15 8	474 7 6
Belingwe	2	48	50	17	1,030	1,047	209 3 2	133 0 0
Ingutsheni Mental Hospital	49	223	272	15,097	63,222	78,319	6,171 10 4	11,677 0 0
Totals	822	3,624	4,446	33,962	161,887	195,849	29,064 0 3	28,726 7 6